

**Issue Brief:**

Should Congress provide funding to municipalities expressly for the establishment of public Wi-Fi networks?

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## **Introduction**

As the world becomes increasingly connected online, being without internet puts people at a disadvantage. Everything from filing taxes, to applying for jobs, to researching critical issues are all easily done online, and sometimes are encouraged. While it is not absolutely necessary to have access to the internet, being connected does bring with it advantages. Jobs often require computer and internet expertise, so building these skills can directly impact a person's economic well-being.

The policy question at hand is: "Should Congress provide funding to municipalities expressly for the establishment of public Wi-Fi networks?"

Wi-Fi networks allow people to share data and connect to the internet wirelessly. This brief will also discuss Internet Service Providers (ISPs) which offer users access to the internet. The assumption in this brief is that installing public Wi-Fi networks would result in either free, or drastically reduced prices for accessing the internet.

Currently, people access the internet in several ways. They may have access at work through company computers, or a Wi-Fi network in the office. At home, they may pay for an internet subscription. They may go to a public library, or to one of the many coffee shops, or related businesses, that supply internet for free, or for a small one-time use charge. Some municipalities have installed public Wi-Fi networks already, and private companies have also selected certain neighborhoods or parks to pilot similar programs. The ability to access these options, though, changes greatly based on the ability to pay for the service, and the proximity to a place that offers internet access. Without access to the internet, people fall behind. This technology gap can stem from not being able to keep up with breaking news stories on Twitter, to not learning the skills required for many jobs today, including knowing how to code, use an online database, saving files to the cloud, and using electronic communication.

Congress providing funding to municipalities to establish public Wi-Fi networks could help to alleviate many of these problems, including the digital gap, and potentially help the local economies (Null). However, creating a policy like this could also be inefficient, ineffective, and could get in the way of a movement already happening, led by private businesses.

The introduction of a policy like this would be spurred by the fast expansion and reliance on the internet, the need for a workforce that is skilled in using the internet, and the benefit of creating jobs through a large infrastructure project.

## **Existing Policy System**

Currently, there has been work on the federal level to explore providing broadband internet access to more Americans. The National Broadband Plan aims to guarantee that every American is given access to the online resources they need (Eggerton). This plan was not written with any specific policy changes in mind. Instead, it was meant to set a roadmap and strategy for where attention should be focused. The goals include wider access at faster speeds and increased American innovation in the mobile sphere, among others ([broadband.gov](http://broadband.gov)).

While there is wide support for increasing access, there is also a concern that there is too large a cost - anywhere between \$20-\$350 billion (Gross). There is a question, too, about if the installation of broadband stunts growth and innovation of companies, since this work is being done for them by the federal government (Atkinson). While the Federal Communications Commission would like to implement the plan, there is a questions about its jurisdiction to implement.

The Federal Communications Commission has also promoted a plan to provide Wi-Fi networks across the country ([broadband.gov](http://broadband.gov)). Supporters like Google and Microsoft say that a plan like this will spur growth and innovation as it will increase access for all Americans. Detractors - mainly phone companies - are concerned that these changes would essentially put them out of business (Kang). With WiFi available everywhere, people could make VoIP calls instead of needing a cell phone contract.

Google, and to a degree other private companies, have already adopted a corporate policy of installing public Wi-Fi networks, at least as a pilot project. Google has installed Wi-Fi networks in Manhattan's Chelsea neighborhood, as well as in 31 of San Francisco's public parks (Chong). This work has been done without any government intervention or policy.

### **Stakeholders**

To fully examine this issue and consider all the implications, it is critical to look at all of those who will be affected by the policy. Some stakeholders strongly support change, while other oppose it. The major groupings of stakeholders break down to consumers, providers, and government and its contractors. Each of these groupings have subdivisions, too.

#### *Consumers*

Consumers are broken up based on how they will receive and use the service.

- **Taxpayers** may fall into one of the other stakeholder groups, but like all other government programs, this policy would be funded by tax revenue, reportedly tens of billions of dollars. This means that all taxpayers have a stake in this policy (Reardon). Some taxpayers may opt to pay for an upgraded internet service because they are not satisfied with the quality of the public Wi-Fi option. Other taxpayers will support not needing to having an individual internet contract, and will pay additional taxes in exchange for public Wi-Fi.
- **Schools** have the potential to add new classes using the internet if Congress appropriates funds to municipalities for wifi. This means more training for students in existing fields or broaching new educational territory. With public Wi-Fi, schools would not have to pay for their own internet service, which would save money in the education budget. Students could also use the public Wi-Fi at home to help with their studies (Albanesius). The drawback to this policy for schools, though, would be that there might be added pressure from parents to add computer equipment, since internet is now available. Schools that didn't already have the equipment would face new budgetary pressures, and also might have to invest in training for its teachers so they could effectively use the equipment.

- **People who could not previously afford the internet** will now be able to afford the internet with public Wi-Fi available. The technology gap would close greatly as access is much less of an issue. The issue of equipment cost will remain, but the market has introduced more low-cost computers and tablets in recent years. Without a monthly internet bill to worry about, buying the equipment might be more attainable.
- **Businesses looking to hire new talent** gain a larger talent pool as more people will have experience online. People who could not previously afford the internet will now have basic skills online, at least. Businesses won't have to invest in training for those who do not have as much online experience. They may also save money since internet will be universally available.
- **Libraries** could lose customers, since people will be able to access internet elsewhere. Those who previously did not have internet access might have used library computers, now they can stay home instead. Though customer loss is an issue, libraries may gain some budget flexibility if their costs for internet lessen after Wi-Fi installation. This will allow them to improve their facility and offerings, ultimately attracting people back to the library.
- **Community Organizations**, similar to libraries, may lose customers because their computers with internet access will not have the same desirability. Libraries and community organizations are often seen as "third places", or a social surrounding for people separate from home and work. If internet is available anywhere, that third place status for these organizations could disappear. However, without the budget line for internet, community organization could invest in new, essential programming, that could better serve existing clients or bring in new people.

#### *Providers*

While consumers would most likely favor this policy, the providers are more split.

- **Internet Service Providers** stand to gain a lot, especially if they are the ones that are contracted by the government to provide the internet being used by the municipality's Wi-Fi units. Those ISPs that did not get the contract, though, would have to rely on other means to stay in business in the municipality, like providing a higher quality service. Instead of having thousands of subscribers within the municipality, the ISP would have one major customer (the municipality). They would need to determine how best to set up the Wi-Fi networks to serve a large population using Wi-Fi. There are major technological issues to making Wi-Fi available to a wide audience, so the company would need to be prepared with solutions, and quality service, so they didn't roll out a bad product. ISPs, particularly those like Google, will likely collect massive amounts of data about users. This information will be worth at least as much as the payments for service from the municipality.
- **Cellular phone companies** will have to change their business model with the implementation of this policy. If internet access is available everywhere, people will be able to replace their cellular phone conversations with Voice of IP calls through services like Skype or Google Chat. Some people may choose to keep their cellular phone contract,

but it is likely that phone companies will have to change their business model. Phone companies have lobbied solidly against any policy proposal similar to this one. As technology changes and the types of services move away from cellular offerings, these companies risk being left behind.

### *Government*

Government officials could be divided on this policy depending on the role they play, and the final details of the policy.

- **Congress** will ultimately decide if this policy will move forward. There are several policy options for Congress, including fully funding installation of Wi-Fi networks, negotiating with companies that are already providing public Wi-Fi, or voting to support an unfunded mandate. Congress will determine if government should have a role providing internet service to its citizens. The resulting decision would likely result positively for some members and negatively for others. Lobbying organizations already try to influence Congressional members on issues similar to this one.
- **Municipal government officials** will need to determine the logistics once the policy is passed. They will need to determine the ISP, the company that installs the Wi-Fi units, how security over a public Wi-Fi network will work, and how the budget will pay for the installation, service, and upkeep of the system. Congress' allocation of funds will have a large impact on the city government officials. A fully funded mandate would benefit the municipal government entities as their constituents would gain an important service. A partially, or fully unfunded mandate might require municipalities to cut other services. The municipal government officials will also be the first to receive complaints when something is not working. The institution of the policy might require the local officials to hire technical support staff, and to undergo customer service training.
- **Contractors who install Wi-Fi networks** fall under government stakeholders because they will be working on behalf of the municipality. Winning the contract to install the Wi-Fi networks would be good for business. Since public Wi-Fi networks are not yet available on a mass scale, these contractors will need to determine optimal locations for the installation of Wi-Fi units, the type of Wi-Fi unit that will provide optimal service and last for a long time, and how security will work with the service.

### **Policy Options**

#### *Do Nothing*

Congress could decide to keep the status quo and not provide funding to municipalities expressly for the establishment of public Wi-Fi networks. A bill such as this would be a dramatic change for the nation, and generally big changes as proposed by the federal government are met with skepticism, especially within Congress. Either not allowing a bill such as this to come up for a vote, or defeating it, would be a real possibility, especially given that there would be a strong lobby opposing a bill like this, and the likely result of a bill that passed would be increased taxes, or that the project would go over budget (Cox). Since some companies, like Google, are already installing public Wi-Fi networks in parts of the country, Congress could determine that this issue is best left to the market to resolve, and eventually companies will install Wi-Fi networks

throughout the country because of the demand of consumers and the benefits the companies receive.

#### *Negotiate with companies to expand their existing efforts*

Companies like Google have already installed public Wi-Fi networks in select locations, and have proposed expanding their efforts to a wider base of people (Probasco). While expanding public Wi-Fi access is already occurring, it is at a relatively slow pace, and not equally distributed. Congress could direct a federal agency, like the Federal Communications Commission, to negotiate with and incentivize companies to expand their efforts at a faster pace and to a broader base of people.

#### *Focus on certain sections of the country*

Since some municipalities have already started installing public Wi-Fi networks (Vos), and some companies have done the same in certain sections of the country, Congress could approve funding only for those municipalities that will not have private companies installing public Wi-Fi networks. The bill could be aimed at municipalities with a population below a certain threshold.

#### *Fund Fully*

Congress might determine that public Wi-Fi networks are a public good, and the opportunities and benefits universal internet access offers is enough to pass a law that would fully fund the installation and maintenance of the networks.

#### *Unfunded Mandate*

While Congress may determine that the installation of public Wi-Fi networks is important, there may not be the political will to fully fund a new multi-billion dollar government program. As a compromise, in Congress' eyes, an unfunded mandate could be passed that would require municipalities to create public Wi-Fi networks for its constituents, but would not provide the monies needed to support the venture. Municipalities would be responsible provide funding to meet Congress' requirements. Within this type of unfunded mandate, Congress would need to stipulate that not complying with the mandate would result in the loss of federal funding elsewhere.

### **Analysis of policy options**

#### *Do Nothing*

Given the current political climate, especially after the perceived failure of the Affordable Care Act launch, many feel that government is not well-suited to take on large policy initiative. The overall cost of this project - potentially hundreds of billions of dollars - would immediately lose a large portion of votes in the Senate. The federal government has almost no experience in setting up public Wi-Fi networks, and many municipalities that have tried to install networks of their own have failed, or there are major issues with the network. The question for Congress here would be if the desired results of the policy will occur with or without their intervention. Companies like Google are already installing Wi-Fi networks in neighborhoods like Chelsea in Manhattan, and in 31 of San Francisco's public parks. Google is also rumored to be planning nationwide Wi-Fi service already.

Any investment by government could crowd-out the companies already thinking about getting involved on their own, and would end up costing public money where private investment might have worked instead. Companies like Google have the incentive to offer free public Wi-Fi and internet service because they would collect data on users. This data is valuable, and pays off in advertising revenue. As demonstrated by the number of people who regularly use Google, Facebook, Twitter, and other similar services, trading personal information for free access to a service is welcomed and accepted.

The drawback to depending on the market is that there are some municipalities or people who will be left out. Companies will focus on areas where they can get the most for their money - places that are densely populated. If the benefit to companies is collecting data, they will want to collect as much data as they can. Installing a Wi-Fi network in a rural part of the country will not be cost-effective, and those communities could be left without public Wi-Fi (Kass).

Cellular phone companies will favor this approach heavily as they do not favor any new legislation due to the fact that it would hurt their existing business (Fitzpatrick). Some ISPs will favor this approach because they have a good existing consumer base, and free public Wi-Fi could cause them to lose customers. Other ISPs would oppose this course of action because having government investment in an already expanding program would provide an extra catalyst to keep the program moving quickly. Taxpayers will be split, too, as some will see legislation surrounding Wi-Fi as a public good, and others who already think of the government as too bloated, will oppose federal funding for a new government program.

#### *Negotiate with companies to expand their existing efforts*

If Congress were to pass a bill allocating funding for the installation of public Wi-Fi networks, they would want to ensure the service works. Incentivizing companies that are already invested in expanding Wi-Fi access would ensure that existing expertise is used, reducing the risk for politicians who might face a backlash from constituents.

Congress would need to direct a federal agency, like the Federal Communications Commission, to work with private companies to expand their existing efforts. This would allow the rural communities that might not have received attention from the private companies to get public Wi-Fi networks installed in a market-based approach, but would avoid the crowding out effect and fully funded bill would bring with it.

This result of the bill would remain a new federally funded program, which at this point would have a difficult time getting passed in Congress. Taxpayers who live in rural communities might favor this approach, assuming they are open to some government spending, since they will now receive public Wi-Fi. Taxpayers in bigger cities might oppose this option because their tax dollars will go to supporting a subsidy that does not directly impact their home municipality. ISPs and companies like Google would heavily favor this type of legislation as it would support their existing efforts and would provide a subsidy to expand their program further.

#### *Focus on certain sections of the country*

The federal government subsidizes certain types of programs and initiatives in select parts of the country because there is a need for the service, even if it does not make sense economically. For

instance, rural airports and certain flight routes are subsidized so people in less populated parts of the country are still able to fly without needing to drive to a major city (Schaper). These airports would not survive without the subsidy, but the government has determined that the airports are an important resource for that community. Similarly, some urban areas are without grocery stores that stock fresh and healthy food (Kolata). In an effort to supply more Americans with access to good food, the government subsidizes grocery stores so they will open in urban areas and stock fresh food. These grocery stores would not be there without the subsidy, but the government has determined that the long-term impact of eating healthy food is beneficial enough to support the subsidy.

Congress could choose to pass a bill that uses these examples as a model for bringing public Wi-Fi networks to rural parts of the country, while relying on private companies to continue their work installing Wi-Fi networks in major cities. Congress could determine a population threshold, and would only provide funding to municipalities below indicated marker.

Taxpayers in the smaller municipalities would favor this approach as they would have access to public Wi-Fi, and would also be the beneficiaries of a federal subsidy. Conversely, larger cities might oppose legislation like this because they would be subsidizing the smaller municipalities. Some of the larger cities, though, might support this approach because although they would be supporting the subsidy, they would also be able to carry on with the private company's investment instead of being caught up in a government program that would be filled with political issues, and might not work as well as what the private company can provide. ISPs would probably support this approach because some would be able to avoid government intervention and be able to continue with their business while not dealing with government red tape. Other ISPs would benefit from the federal subsidy offered.

### *Fund Fully*

Congress could determine that like the interstate highway system, this policy is important enough to implement, and that private companies do not have the resources or interest to take on a national project like this one. Sometimes the federal government is the only organization that is able to take on projects of this size. Though a new federal program that would cost billions of dollars is unlikely to pass, there could be enough public support and pressure to become law.

A fully funded law would generate many new jobs as people would need to actually install the network nation-wide. Significant research would also have to be done about how best to install the networks so they are efficient, effective, and long-lasting.

Phone companies would oppose a fully funded bill, as would some taxpayers, and some ISPs. As stated before, some of the private companies would prefer to continue with the work they have already started instead of getting slowed down by government regulations. This option is essentially the opposite of Congress doing nothing. Congress would willingly crowd out the existing companies invested in this space in the interest of pursuing a policy that reaches all Americans equally.

### *Unfunded Mandate*



Congress has passed unfunded mandates in the past, the most recent well-known of which is No Child Left Behind. Unfunded mandates give Congress some cover as they are seen as being interested and concerned about a societal issue, but they do not get criticized for expanding government expenses. Generally unfunded mandates have the potential for loss of other federal funding if the mandate is not adhered to within a certain amount of time.

While some might benefit from the mandate, because municipalities would have to install public Wi-Fi networks, almost all stakeholders would oppose this course of action. Even the private companies who might be contracted to install the Wi-Fi units would be skeptical of this approach because the funding to comply with this mandate would mean either that this funding is not stable in the long-term, or that other essential funding is cut.

### **Conclusions and recommendations**

To help determine the best course of action for policy is to focus on the quality of the service offered. When Wi-Fi networks are being used by a large group of people, the service slows down. Since this initiative is new and relatively untested, especially at such a large scale, there is the potential for things to go wrong. Given that many people do not like change, and that some will desire faster service that is customized to their needs, there will always be a private market available for private internet usage. If private internet services are far superior to the public Wi-Fi option, many people will opt to paying for the service. While a fully instituted policy of all municipalities offering public Wi-Fi would have its benefits, it might not do much to close the digital divide. Wealthier citizens will pay for the better service, as might some wealthier communities. The poorer citizens might be able to access the internet from home, but would still miss out on the best, most up-to-date features that the private services offer. A tiered system might guarantee internet access to all, but would still have a digital gap. Ultimately, Congress would have to ask if authorizing funding to install the Wi-Fi networks does anything to solve the initial societal issue they set out to conquer, and if the massive public investment was worth it.

Government's purpose is to provide essential services where the market has failed. When government oversteps these bounds, the result is inefficiency and waste. Public Wi-Fi access brings with it the potential for huge benefits, and the closing of the digital gap. Given that the internet is an essential part of life for many Americans, whether it is being used to pay bills, taxes, do critical research, or connect with others, it seems that all citizens should have access. While there are options to get online for almost every American, having connectivity from home is an important step. Companies like Google, though, are already planning on doing this, to some degree. Because of this, a fully funded policy would incur too much expense on the tax payer's part.

On the other hand, Congress doing nothing is not a good solution, either. Some people will be left out, as private companies will not have an interest in installing public Wi-Fi in every corner of the country. Though any bill Congress passes into law will likely result in a tiered service, the importance of providing everyone with universal access to the internet is too important to ignore. This is where government can step in and fill the gaps left by the market.

Negotiating with companies to expand their existing networks could work, but companies would also quickly catch on that subsidies were available, and might stop their progress altogether. The government would not be left in a good negotiating position.

Congress setting a population threshold for where it will focus seems like the best solution. There is a precedence for federal subsidies going to certain areas of the country. These focused subsidies would allow the government to fulfill its core mission. Companies like Google would know the threshold, so would not be deterred from continuing their work in bigger cities. This policy would crowd them out of the municipalities that fell below the threshold, but Congress takes on the assumption that Google was never focused on these types of municipalities, anyway. Focusing on smaller municipalities would also allow for a better chance of the bill passing through Congress. Generally, bigger cities vote along the lines of supporting government programs, especially where they can help those who would be left behind otherwise. It is the smaller municipalities that would oppose the new government program, but would be more likely to support this initiative because they are the ones who are directly benefitting, and they are not being asked to subsidize any programs in the bigger cities. Though this type of bill would struggle to get through Congress, it is the most pragmatic and effective solution to spreading public Wi-Fi networks across the country.

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