

### Where is the Broadband?

Dr. Nathan Smith, the Broadband Manager for the state of Arkansas said that Broadband (high speed internet) is “evolving into a necessity for modern life, similar to traditional utilities such as electricity, telephone service, sewage, and water”. High speed internet is becoming a necessity for modern life, but still many people in rural areas are living in the dark ages. Rural areas across the nation have been faced with declining populations for many years now. The University of Michigan estimates 82% of the U.S. population lives in urban areas, which is up from 64% in 1950. They expect that by 2050, 90% of the U.S. population will live in urban areas (U.S Cities Factsheet). The Center for Strategic and International Studies says that cities continue to expand because their “capacity to attract business and create jobs to drive that growth” (Urbanization, Opportunity, and Development). In the modern world rural communities can’t compete for new businesses, and often a limiting factor is the speed of the internet that a business would have. Many people look to the past glory days of abundant manufacturing jobs as the reason for small towns economic success. Those glory days are gone due to cheaper foreign manufacturing opportunities. Now it is time for rural areas to focus on the future and not the past. People living in rural areas have been left in the dust when it comes to high-speed internet access. The lack of economic opportunity for small towns can be contributed to their lack of ability to compete in the modern online business world. Many jobs and business opportunities happen online, and having access to high speed internet is very important for efficient completion of work. Completing an upload or download can take way too long without access to high speed internet. Efficiency and productivity are hampered for many people who live in rural areas. For many, working from home on a computer can be frustrating or impossible. Lack of high speed internet also affects education. Students lack the ability to take online classes, or learn from services like skillshare or youtube. Many Rural areas do not have access to high speed internet which has negative effects on a community's ability to modernize, which leads to less economic opportunity, less educational benefits, and less access to healthcare. This problem is being addressed by politicians and the private sector, but it is clear by the current state of the problem that not enough has been done.

High speed internet, also known as broadband, is defined by how much volume of information can move through the internet at one time. Internet speed is measured in megabits per second, or mb/s. The Federal Communications Commission defines broadband as digital speeds of at least 25 megabits per second for downloading, and 3 megabits per second for uploading (Bodin). Download speed is how fast information travels from a remote location on the internet to your internet-connected devices. This is used when streaming a video from youtube, or downloading a file to a computer. Then there is upload speed, which is how fast how fast your device sends information to a remote location on the internet. Upload speed is very important for business because it determines how fast a boss, or client can receive information. Approximately 19 million people in the United States lack access to broadband. Of that 19 million people, 14.5 million live in rural areas (Eighth Broadband Progress Report). That is nearly one-fourth of people in rural areas without access to broadband. Greta Byrum, director of Resilient Communities Program at New America, considers broadband as “fundamental” in the

success of “economic, political, and social life of our society” (Bodin). The importance of broadband and the effects it has on the economy is big! Christopher Mithcell, director of Community Broadband Networks, says that meeting the Federal Communications Commission minimum may not get you very far when trying to attract businesses (Bodin). New business is an important part of economic growth, unfortunately some small towns can miss out on good opportunities because they don’t have broadband.

The lack of high-speed internet in rural areas has negative effects on the economy of these rural communities. It affects many aspects of the economy such as: small towns ability to attract new companies, new jobs, work efficiency and productivity. Mom-and-pop retailers and small businesses need high speed internet to be able to communicate efficiently with customers, suppliers, and bigger companies. Simple tasks such as sending emails and big files cannot be completed in an efficient manner. An employee with a slow upload speed, below 3mb/s, will have trouble sending big files out to a superior, or customer (Bodin). You can imagine the many scenarios where efficiency is important for business, but without high speed internet it can be very hard to be efficient because you can be stuck watching a loading screen. For businesses that rely heavily on tourism, it is important that they can have a strong internet presence to attract new customers, and then communicate with them once they have decided to buy their services. In an article titled “Equal Access Equal Opportunity” it discusses how broadband can attract new companies, and expand the workforce (Frederick). The workplace is evolving and new types of jobs are being created. One example of this is in the medical field, where medical facilities send out x-rays for radiologists to review. Broadband can provide local manufacturing industries with global market accessibility which can lead to new opportunities (Mayberry). Reaching the global marketplace is an exciting new opportunity that only becomes possible through high speed internet. New opportunities come with access to the internet. In the farming profession new technologies use broadband, like remote soil sensors and targeted irrigation that help increase yields, lower cost, and conserve resources (Crawford). These are just some of the ways rural areas economies are affected by the lack of high speed internet. Many rural communities need a spark of new opportunity, and high speed internet can provide that spark to the economy.

Broadband is becoming a necessity for further educational development. It can provide new opportunities and new ways to learn for rural communities. For some kids, driving to the nearest fast food to get on wifi is a necessity in order to turn in homework online. Students use the internet and online classes to become better students and gain knowledge that otherwise would not have been available to them. Websites like youtube and skillshare can be used to gain knowledge on how to do algebra or how to play the guitar. Local colleges can provide engineering and mechatronics classes that require broadband to teach. Online classes offer a great way for students to earn a degree on their own schedule, and for a cheaper price than traditional college courses. Online technology implemented into online classes can “bend the cost curve” for higher education (Goldin, Claudia, Katz, Yuchtman, & Noam). Broadband can provide rural communities with the ability to learn online, and learn for a cheaper price.

Local economies and education are not the only beneficiaries when it comes to broadband. Healthcare can benefit from broadband. Local hospitals care reach more patients through telemedicine. Rural patients who lack access to healthcare can use telemedicine to get medical diagnosis, and receive patient care from specialists who are located elsewhere. It has also been found that telemedicine visits are cheaper than face-to-face visits (Eighth Broadband Progress Report).

There are many benefits that come from access to broadband for rural areas, so why is it still such an issue? The simple answer is that for the private sector that provides broadband, it does not make economical sense. The infrastructure required to provide broadband is expensive, and is not worth the price for so few users in rural areas (Mayberry). This is where the government can step in. The growing need for broadband for rural areas has caught the attention of lawmakers and politicians. In Arkansas Governor Asa Hutchinson established the “Arkansas Rural Connect” grant program. This program offers 25 million dollars within the state broadband office to offerer higher internet speeds, 25 mb/s download and 3 mb/s upload, to rural communities around the state (Arkansas Rural Connect). The qualifications for a community to receive support from this grant program are (1) have a population of at least 500 people where (2) less than 50 percent of the population already has speeds of 25/3. The money for this program comes from Federal Communications Commission (FCC), the U.S. Department of Agriculture (USDA), and the U.S. Department of Commerce. These programs are put in place to help deploy broadband around the country. The Arkansas Rural Connect will be able to connect communities around the state, and let them reap the benefits of having higher internet speeds. Other States are working on solutions similar to what Arkansas has proposed. States need to continue working to find the best solution for the issue.

Broadband has become a necessity in the modern world, similarly to the way electricity is a necessity. Still there are many rural areas that do not have access to broadband. The barriers can be overcome with the continued work of state legislatures to come up with the best solution to providing broadband. People in rural areas can greatly benefit from broadband by having more economic opportunity, better access to online schooling and educational tools, and more accessible healthcare.

## References

- Bodin, M. (2017). A need for SPEED. *Planning*, 83(9), 23-28. Retrieved from <http://0-search.proquest.com.library.uark.edu/docview/1950037451?accountid=8361>
- Crawford, B. (2018). White space the solution for rural broadband? *The Mississippi Business Journal*, 40(18), 6-7. Retrieved from <http://0-search.proquest.com.library.uark.edu/docview/2049606098?acco>
- Frederick, Eric, AICP, L.E.E.D.A.P. (2019). Equal access equals opportunity. *Planning*, 85(7), 20-25. Retrieved from
- Governor Hutchinson Announces the “Arkansas Rural Connect” Grant Program, \$25 Million for Broadband Deployment. (2019, August 8). Retrieved from <https://governor.arkansas.gov/news-media/press-releases/governor-hutchinson-announces-the-arkansas-rural-connect-grant-program>.
- J, D., Goldin, Claudia, Katz, Yuchtman, & Noam. (2015, January 22). Can Online Learning Bend the Higher Education Cost Curve? Retrieved from <https://www.nber.org/papers/w20890>.
- Mayberry, A. (2017). Co-ops play vital role in extending broadband in rural tennessee. *Rural Cooperatives*, 84(4), 10-13. Retrieved from <http://0-search.proquest.com.library.uark.edu/docview/1923241022?accountid=8361>
- Urbanization, Opportunity, and Development. (2019, December 3). Retrieved from <https://www.csis.org/analysis/urbanization-opportunity-and-development>.
- U.S. Cities Factsheet. (n.d.). Retrieved from <http://css.umich.edu/factsheets/us-cities-factsheet>.