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Javier Valentín-Sívico
Missouri University of Science and Technology, jvxfq@mst.edu

Casey I. Canfield
Missouri University of Science and Technology, canfieldci@mst.edu

Ona Egbue

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Push them forward: Challenges in intergovernmental organizations' influence on rural broadband infrastructure expansion

Javier Valentín-Sívico^a, Casey Canfield^{a,*}, Ona Egbue^b

^a Missouri University of Science & Technology, Engineering Management & Systems Engineering, 600 W 14th St, Rolla, MO 65409, USA

^b University of South Carolina Upstate, Informatics and Engineering Systems, 800 University Way, Spartanburg, SC 29303, USA

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ABSTRACT

Many rural US communities lack access to adequate broadband services. This paper draws on semi-structured interviews conducted in 2019 with 16 Regional Planning Commissions to uncover dynamics of how these intergovernmental organizations contribute to the deployment of broadband infrastructure in rural Missouri. The proposed framework integrates the decomposed Theory of Planned Behavior (TPB), the Theory of Reasoned Goal Pursuit, and Stakeholder Theory. Many participants reported a low level of involvement in broadband infrastructure initiatives even though supporting infrastructure development to promote economic growth is one of the Regional Planning Commissions' primary goals. Regional Planning Commissions are highly influenced by four primary stakeholder groups, (1) residents and businesses, (2) local governments, (3) internet service providers, and (4) state and federal government, which vary in terms of priorities and power. While defining the region's priorities with elected officials, Regional Planning Commissions often "push them forward" to recognize the necessity of broadband infrastructure. However, Regional Planning Commissions also struggle with low self-efficacy and inadequate expertise to support broadband planning efforts. The proposed framework could be generalized to understand actions and decisions by other intergovernmental organizations that have convening power and face similar power dynamics with their stakeholders.

1. Introduction

Over the last decade, rural America had higher poverty rates and fewer jobs added when compared to their metro counterparts (Cromartie, Dobis, Krumel, McGranahan, & Pender, 2020; USDA, 2020). Having adequate broadband infrastructure is critical for supporting economic growth, civic engagement, and resilience (Ashmore, Farrington, & Skerratt, 2017; Conroy & Low, 2021; Pai & Ajit, 2018; Roberts, Anderson, Skerratt, & Farrington, 2017; Whitacre & Manlove, 2016; Whitacre, Gallardo, & Strover, 2014), especially in the context of the COVID-19 pandemic (Ali, 2020; Maixner, 2021; Smith, 2020). Fulfilling the need for adequate broadband infrastructure represents a significant business opportunity for telecommunication companies. However, the opportunity to maximize profit is highest in areas with high population density (Galloway, 2007) and most rural communities have a low population density. As a result, state and federal government agencies administer programs to incentivize the deployment of broadband infrastructure and services in rural communities (FCC, 2020; LaRose et al., 2014; LaRose, Strover, Gregg, & Straubhaar, 2011; Missouri Office

of Broadband Development, 2020; USDA, 2018).

This study aims to contextualize the network of influence among rural broadband stakeholders who vary in power and expertise and develop an integrated theoretical framework for explaining the mechanisms behind rural broadband planning barriers. We conducted a series of semi-structured interviews in 2019 (pre-COVID-19) with Missouri Regional Planning Commissions (RPCs) to identify barriers for rural broadband infrastructure expansion (Canfield, Egbue, Hale, & Long, 2019; Valentín-Sívico, Canfield, & Egbue, 2020). Qualitative analysis suggests that despite emphasizing the importance of broadband infrastructure for rural communities' economic development, few RPCs reported playing an active role. To describe and explain this phenomenon, we derive a theoretical framework that integrates the decomposed Theory of Planned Behavior (TPB), the Theory of Reasoned Goal Pursuit, and Stakeholder Theory to explain planning dynamics for rural broadband infrastructure.

This is particularly critical for technologies, such as broadband, which have not traditionally been a focus of these organizations. The theoretical and practical contributions of this work include (1)

* Corresponding author.

E-mail addresses: jvxfq@mst.edu (J. Valentín-Sívico), canfieldci@mst.edu (C. Canfield), egbueo@uscupstate.edu (O. Egbue).

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demonstrating how behavioral theories can be used to inform the motivations of actors within complex organizational networks, (2) applying this approach to the challenge of expanding rural broadband, which makes an interesting test case because of the need for public-private partnerships, and (3) illuminating the role of RPCs in this ecosystem. Ultimately, this framework supports the development of interventions to reduce these planning barriers.

2. Background

2.1. Rural broadband funding in the USA

The government can subsidize internet service providers (ISPs) in the form of grants or loans to develop infrastructure in unserved (< 10/1 Megabits per second or Mbps download/upload) and underserved (< 25/3 Mbps) communities (Miller, 2014). The U.S. federal government has been funding rural broadband across multiple agencies using various mechanisms since 2002 (United States Government Accountability Office, 2017). As shown in Table 1, the Federal Communications Commission (FCC) runs the Connect America Fund (Connected Nation, 2018), which provides funding for deployment projects over 10 years. Similarly, the United States Department of Agriculture (USDA) ReConnect Program and Community Connect Program award grants and loans for broadband deployments underserved rural areas (USDA, 2021a, 2021b). As part of the American Recovery and Reinvestment Act (ARRA) of 2009, additional stimulus funds were available. For example, the National Telecommunications and Information Administration (NTIA) managed the Broadband Technologies Opportunities Program, which supported infrastructure deployment in unserved and underserved communities (ARRA & REA, 2009). At the state level, additional funding is being distributed. For example, the Missouri Broadband Grant Program was created in 2018 and distributed \$5 million in funding for the first time in 2020 to assist providers, communities, counties, and regions in building broadband infrastructure in unserved and underserved areas of the state (Missouri Office of Broadband Development, 2020).

Historically, stimulus funds (such as ARRA in 2009) have been one of the few sources of funding for broadband planning. Even before COVID-19, funding for rural broadband was increasing with programs like the FCC’s Rural Digital Opportunities Fund (\$20 billion) (FCC, 2020). However, more recent efforts in response to the COVID-19 pandemic have dramatically increased funding levels for deployment efforts, such

Table 1
As of 2019, Federal Funding was Primarily Focused on Directly Funding Infrastructure Deployment.

Program	Source	Type	Allowable Projects	Funding (Year)
Connect America Fund II (CAF II)	FCC	Reverse auction	Deployment of at least 10/1 Mbps in unserved high-cost areas	\$1.49 B (2018)
ReConnect Fund	USDA	Loans, grants	Deployment of at least 25/3 Mbps in unserved and underserved rural areas	\$656 M (2019)
Community Connect Program	USDA	Grants	Deployment of broadband service to the whole community (residences, business, and public facilities)	\$152 M (2019)
Broadband Technologies Opportunities Program	NTIA (ARRA)	Grants	Middle mile broadband infrastructure, public computer centers, sustainable broadband adoption	\$4.7 B (2009–2010)

as the Coronavirus State and Local Fiscal Recovery Funds and the Capital Projects Fund (U.S. Department of the Treasury, 2021a, 2021b). Many of these funds will be managed by state and local governments, which will need regional planning support. LaRose et al. (2011) suggest that grants may be the most effective if they stimulate competition by private ISPs while also funding community education efforts. However, the government needs better data and mapping to support evidence-based decision-making in the design and implementation of rural broadband investment programs (Hambly & Rajabiun, 2021).

2.2. Regional planning for rural broadband

Both top-down and bottom-up planning approaches have been investigated and used to bring broadband service to rural communities with varying degrees of success. Research suggests that a community-based approach (i.e., bottom-up) provides a better platform to address the need of rural communities (Salemink, Strijker, & Bosworth, 2017). However, some communities lack sufficient human capital with knowledge and expertise to address the rural broadband gap and need to attract external experts (Ashmore et al., 2017; Techatassanasoontorn, Tapia, & Powell, 2010). Salemink and Strijker (2018) conclude that citizens alone cannot bear the responsibility of finding a solution to their broadband needs. RPCs are positioned to support bottom-up planning processes.

Regional Planning Commissions (RPCs, also known as Councils of Government) are nonprofit intergovernmental organizations that support town and county members for infrastructure and economic development planning by writing grants for federal funds for specific projects (NARC, 2021). RPCs typically have in-house expertise for administering federal funding, performing GIS analysis, and coordinating planning efforts that exceed the capabilities of smaller, local levels of government. Given that the capabilities in towns and counties vary, RPCs offer different services depending on the needs of their region. In addition, RPCs vary in size and staffing, which influences the type of services they offer. Most RPCs provide infrastructure planning support for water, sewage, and transportation. They lead periodic planning efforts to develop a Comprehensive Economic Development Strategy (CEDS), which often highlight a need for broadband, and support emergency preparedness planning. In some cases, the RPCs also run regional programs such as recycling, housing, and workforce development (MACOG, 2020).

Most research on RPCs has focused on improving planning practices, especially for transportation. Evaluation efforts suggest that place-specific plans are critical for success, as local support should be considered when prioritizing efforts (Allred & Chakraborty, 2015; Guerre & Evans, 2009). In addition, RPCs are a major facilitator of knowledge sharing within a region, such that municipalities tend to behave more similarly within a region, regardless of geographic proximity to other municipalities (Mitchell, Davis, & Hendrick, 2021). Little research has focused on how RPCs contribute to the expansion of broadband infrastructure, as most planning literature focuses on urban, rather than rural, regions (Rickabaugh, 2021).

However, RPCs have historically played important roles in broadband planning efforts when funding was available. For example, in 2009–2013, there was a statewide stimulus-funded broadband planning initiative in Missouri called MoBroadbandNow (MoBroadbandNow, 2013; Read & Porter, 2013). RPCs were the primary conveners and outcomes included region-specific plans, survey data collection, and mapping of existing assets and access. Similarly, the Southeastern Wisconsin Regional Planning Commission created an advisory committee of representatives from the public and private sectors, including major wireless and wireline communications service companies and local governmental agencies, to support the creation of public-private partnerships (Schlager, 2008).

2.3. Theoretical frameworks

2.3.1. Theory of planned behavior

The Theory of Planned Behavior or TPB (Ajzen, 1991) has been used to explain and predict behaviors in a large number of domains (Ajzen, 2020), ranging from intentions to use public transportation (Nordfjærn, Şimşekoğlu, & Rundmo, 2014) to intentions to engage with government-led initiatives through Facebook (Alarabiat, Soares, & Estevez, 2021). As shown in Fig. 1 via the white boxes, TPB proposes that attitudes, subjective norms, and perceived behavioral control predict intentions and, ultimately, behavior (Ajzen & Kruglanski, 2019). Since initially proposed, other researchers have expanded on the initial framework to derive the decomposed TPB, which is shown via the grey boxes in Fig. 1 (Taylor & Todd, 1995).

Beyond individual behavior, TPB has been used to study the behaviors of individuals within organizations. Examples include the intention to hide knowledge from colleagues inside R&D organizations (Xiong, Chang, Scuotto, Shi, & Paoloni, 2019), the intention to perform and innovate as managers in nonprofit organizations (Reinhardt & Enke, 2020), and employees' intention to support organizational change (Jimmieson, Peach, & White, 2008). In organizational behavior studies, researchers conduct interviews with key senior managers to determine the organization's intentions. Treating the managers' opinions as a proxy for the organization enables the use of TPB at the firm level (Jin, Chai, & Tan, 2012).

While positive attitudes increase intentions, negative attitudes decrease intentions to engage in a behavior. For example, in the context of switching to cloud-based enterprise resources, information technology managers revealed that they were less likely to switch if they were satisfied with their current solution (Mezghani & Muhammad, 2014). In this case, the perceived benefits did not outweigh the risks. The decomposed TPB describes attitude in terms of relative advantage, complexity, and compatibility (Taylor & Todd, 1995).

In addition, people are more likely to intend to engage in a behavior if they perceive that others are engaging in or approve of the behavior. These subjective norms range from descriptive norms, beliefs about whether others perform the behavior, to injunctive norms, the expectation that an individual or group approves or disapproves of performing the behavior. In many cases, subjective norms are influenced by stakeholders outside of the organization. Decomposed TPB suggests that normative influences (e.g., from peers, superiors, mass media) contribute to subjective norms (Taylor & Todd, 1995). For example, interpersonal influence (e.g., word of mouth) was more influential than external influences (e.g., media) in encouraging adoption of proximity mobile payment services in Greece (Giovannis, Tsoukatos, & Vrontis,

2020).

Lastly, perceived behavioral control (e.g., beliefs about relevant skills or resources) is needed to support intentions, otherwise people will not engage in the behavior (Ajzen, 2020). For example, logistics managers perceive corporate policies and firm traditions as constraints on their behavior (Busse, Regelmann, Chithambaram, & Wagner, 2017). In decomposed TPB, perceived behavior control is influenced by self-efficacy and facilitating conditions (Taylor & Todd, 1995).

2.3.2. Goal systems theory & theory of reasoned goal pursuit

In parallel with the development of the decomposed TPB, TPB was also integrated with Goal Systems Theory (Ajzen & Kruglanski, 2019). Ajzen and Kruglanski (2019) proposed integrating TPB (which focuses on behavior) with Goal Systems Theory (which focuses on goals) to improve explanatory power in a new framework called the Theory of Reasoned Goal Pursuit. According to Goal Systems Theory, human action is goal-driven (Kruglanski et al., 2018). The degree to which an individual or organization is determined to pursue a goal is assumed to vary as a function of the value assigned to the goal and by the expectation of attainment. Successfully achieving the desired objective generates a positive effect of satisfaction, and failure to attain the desired goals produces a negative effect of disappointment.

As shown via the black boxes in Fig. 1, the Theory of Reasoned Goal Pursuit adds factors related to goals, which influence motivation to perform a behavior. There are two types of goals, (1) procurement goals, which influence attitudes, and (2) approval goals, which influence subjective norms. Procurement goals are the desired outcomes and experiences of the individual (e.g., a goal to lose weight). Individuals may perform behaviors (e.g., go on a diet) despite negative attitudes if they are aligned with their procurement goals. Approval goals are the motivation to seek approval from specific individuals or groups (e.g., choosing to work out because a significant other approves).

This theory is particularly relevant in the context of organizations, where accounting for organizational or external stakeholder goals can significantly improve predictive power. If a behavior is perceived to advance the active goals of the organization, the likelihood of engaging in the behavior increases (Ajzen & Kruglanski, 2019). There is significant variability across domains in terms of how effectively TPB explains the data. As a result, the Theory of Reasoned Goal Pursuit is likely to be more effective in goal-driven contexts like organizations.

2.3.3. Stakeholder theory

Stakeholders are the groups and individuals that have a valid interest in the activities and outcomes of an organization and on whom the organization relies to achieve its objectives (Freeman, 1984). Thus,

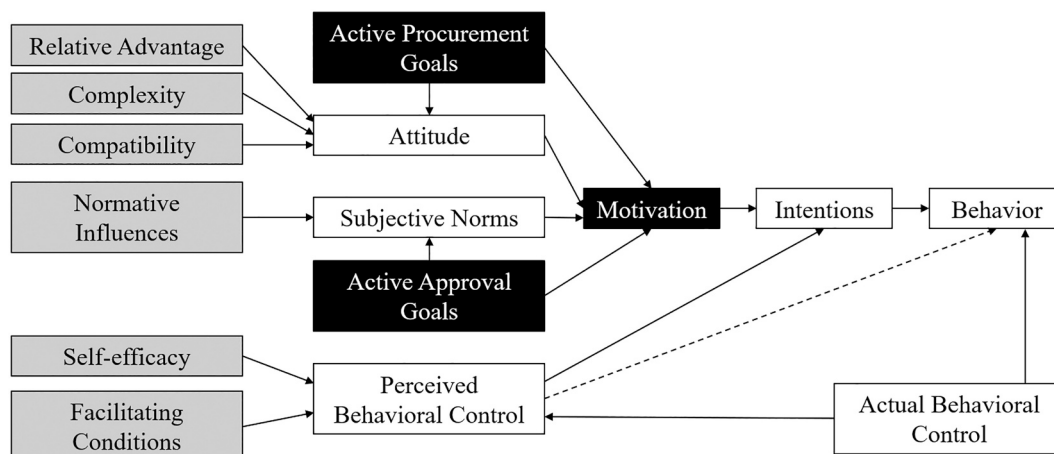


Fig. 1. Summary of the original Theory of Planned Behavior (white) with decomposed factors (grey) and added elements for the Theory of Reasoned Goal Pursuit (black).

internal (e.g., owners and employees) and external (e.g., suppliers, competitors, activist groups, and the government) stakeholders influence the perceptions of individuals within a firm. Generating a stakeholder influence diagram can help public organizations create and sustain coalitions that help realize their particular mission (Bryson, 2004; Freeman, Harrison, Wicks, Parmar, & de Colle, 2010).

Although first developed in the context of private firms, Stakeholder Theory has been adapted and applied to study nonprofit and governmental organizations (Best, Moffett, & McAdam, 2019; Bryson, 2004; Falqueto, Hoffmann, Gomes, & Onoyama Mori, 2020; Fraczkiwicz-Wronka, Ingram, Szymaniec-Mlicka, & Tworek, 2021; Gomes, Liddle, & Gomes, 2010; Krashinsky, 1997; Siriwardhane & Taylor, 2014). For example, in the context of strategic planning at a public university, the most influential stakeholders were those who could exert control over the university, which can be counter-productive to the university's mission to serve students and society (Falqueto et al., 2020).

Several studies have integrated TPB with Stakeholder Theory in an organizational context. For example, Busse et al. (2017) generated an integrated framework to explain the role of energy in logistics and found that managers' perceptions were influenced by a wide range of stakeholders from the organization (e.g., investors, employees), the operating environment (e.g., customers, activist groups), and the broader environment (e.g., technological change, global economic forces). Stakeholder Theory is related to Goal Systems Theory since different stakeholders have different motivations, which inform the goals of an organization and activate specific attitudes and norms (Hilton, Hajiha-shemi, Henderson, & Palmatier, 2020).

3. Methods

3.1. Data collection

We recruited directors of Missouri RPCs for in-depth semi-structured interviews in June and July 2019. Sixteen (16) of the 19 Missouri RPCs (84%) chose to participate. Each RPC director received an email invitation and up to four reminders. The RPCs that did not participate either did not respond to inquiries or felt that their urban territory was not relevant. Most interviews were conducted in-person at the RPC headquarters, but three were conducted via phone.

The semi-structured interviews lasted 50 to 100 min. Each interview was recorded and professionally transcribed. Each interview included questions on regional priorities, existing broadband infrastructure, successes and failures related to expanding broadband access, and strategies for planning and coordinating infrastructure deployment in general. The interview protocol, codebook, and summary memos are available at Open Science Framework, <https://osf.io/8qwgw/>.

3.2. Data analysis

After all the interviews were completed, emerging themes were identified and added to a priori themes from Canfield et al. (2019). These themes were used to develop a codebook (Saldaña, 2010), which became a living document that was revised during coding. The act of coding is a process of identifying segments from qualitative data that relate to a particular theme. Many of the codes we used in the coding process came from the collected data itself, which is an inductive approach to defining the codes (Elliott, 2018).

Each interview was coded independently by at least two coders, and consensus coding was used to finalize the coding of each interview (Hill, Thompson, & Williams, 1997). First, two randomly selected interviews were independently coded by all three members of the research team before finalizing the coding using a consensus approach. As Hill et al. (2005) recommend, each interview's coding was audited by a person not involved in the consensus coding. For the rest of the interviews, the interviews were coded by two team members, while the third member audited the completed interview. After coding, we observed that some of

the codes aligned with the constructs in TPB and this guided the development of the proposed integrated framework.

Rural broadband infrastructure stakeholders were identified based on the interview data. We followed Bryson's (2004) recommendation that a broad array of groups should be recognized as stakeholders regardless of their power level. After identifying the stakeholders, we identified which codes were influenced by the different stakeholders. The findings section was shared with the directors of the RPCs who participated in the interviews so they could provide feedback.

4. Findings

This section describes (1) stakeholder influence on RPC intentions and (2) RPC intentions to engage in rural broadband efforts via a theoretical framework that draws on the Theory of Planned Behavior, Goal Systems Theory, and Stakeholder Theory.

4.1. Stakeholder influence on RPC intentions to engage in rural broadband efforts

In the context of rural broadband infrastructure, there are four primary stakeholder groups that vary in terms of their ability to exert influence on RPCs. On the demand side, the stakeholders include residents, business owners, and local governments. On the supply side, stakeholders include ISPs as well as state and federal governments. These stakeholders have different goals and vary in their power to make decisions about rural broadband. In addition, there is variation within stakeholder groups. For example, some rural cooperatives (co-ops) are ISPs and may be more willing to forego short-term profit in the interest of community development. Table 2 summarizes the primary goals of the stakeholders, their level of decision-making power, and how they influence RPCs. As shown in Fig. 2, RPCs primarily work with government organizations (solid lines) and secondarily work with other stakeholders (dotted lines).

4.1.1. Demand-side stakeholders

On the demand side, current and potential residents and business owners influence RPCs by perceiving benefits, subscribing to services, and learning from peers. Many residents and business owners want the quality-of-life benefits that accompany broadband access, such as employment, education, health, and entertainment opportunities. Local governments influence RPCs by setting priorities, learning from peers, and participating in broadband planning efforts. Ultimately, the goal of local government is to support economic development to increase their tax base and ability to serve local residents. However, residents and

Table 2
Stakeholder Groups Have Different Goals, Levels of Decision-Making Power, and Influence on Regional Planning Commissions.

Stakeholder Group	Primary Goal	Decision-Making Power	Lever of Influence on RPCs
Residents and Business owners	Quality of life and business efficiency	Low	Adopting broadband and realizing benefits.
Local Governments	Economic development	Low	Setting bottom-up priorities at the county/municipal level and participating in regional broadband planning efforts.
Internet Service Providers	Profit	High	Bidding on projects, making deployment decisions, and influencing data quality.
State and Federal Government	Equity	Medium	Setting top-down priorities and eligibility requirements for financing.

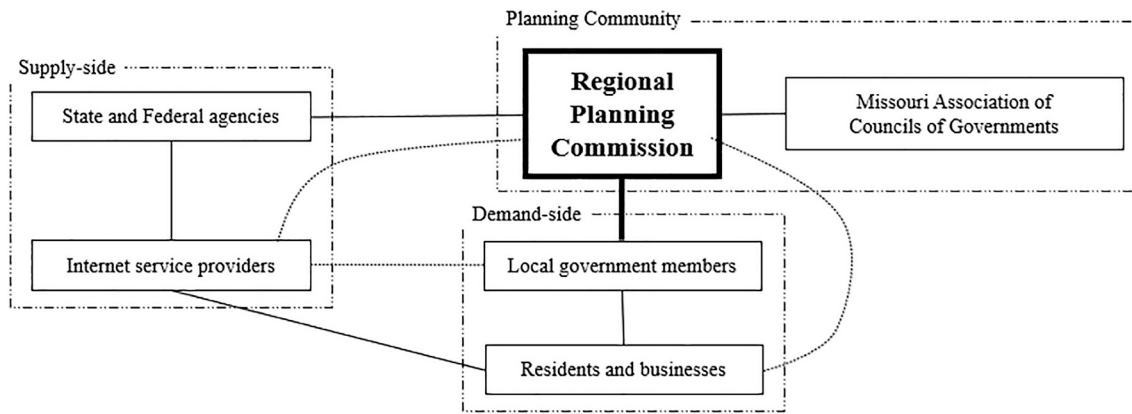


Fig. 2. The Regional Planning Commission interacts with the four key stakeholder groups via primary (solid line) and secondary (dashed line) interactions.

business owners, as well as local governments, have very little decision-making power. Even when they have much to gain from broadband access, the demand-side lacks the authority, expertise, and capital required to invest in and operate broadband infrastructure. RPCs bridge this gap via their convening power to bring together the demand and supply sides.

Many residents and business owners recognize that they are disadvantaged due to lack of broadband. While there is much discussion of this digital divide between urban and rural areas (Salemink et al., 2017; Whitacre, Strover, & Gallardo, 2015), this same dynamic emerges between small towns to create haves and have-nots. RPCs are aware that economic opportunities can go to neighboring communities that have better broadband infrastructure (Q1, P8).¹

Residents and business owners ultimately make their support for rural broadband known by choosing where to live and operate. There is demand for the small-town way of life, but they do not want to sacrifice modern conveniences, implying that broadband is perceived as a necessity rather than a luxury (Q2, P1). Residents and business owners perceive benefits to rural broadband access. For example, precision agriculture can enable farmers to do more with less (Q3, P3), telecommuting expands job opportunities (Q4, P16), and telemedicine helps individuals that live long distances from hospitals (Q5, P5). Broadband benefits are framed as making rural areas generally more desirable for living and working (Q6, P7).

As residents from rural communities without broadband access interact with family and friends from other locations similar to their own, they learn about the benefits of broadband access and opportunities for realizing similar success. Communities are sensitive to what counts as a valid comparison. They recognize that it is challenging to bring ISPs to rural areas. Seeing successful communities that are similar to their own makes residents aware that gaining access to broadband is a possibility for their communities (Q7, P2). However, not all residents are equally interested in subscribing to broadband services. Some rural counties have an older population who might not need or want the technology. This may contribute to lower adoption rates, which make ISPs less likely to want to invest in an area. This also creates a negative feedback loop that discourages younger residents from staying, returning, or moving to the region (Q8, P7).

Local governments vary in their interest and ability to participate in rural broadband efforts. Other infrastructure, such as transportation and water, have historically been under the purview of local governments to operate and maintain. Local governments may feel obligated to focus on those types of infrastructure that are seldomly provided by the private sector (Q9, P3). Thus, in the context of setting priorities, local

government officials may not consider broadband to be as important. Given limited budgets due to their smaller tax base, local governments have to focus on public infrastructure systems. Consequently, some local government officials believe broadband is a luxury, rather than a necessity, for rural residents (Q10, P5).

4.1.2. Supply-side stakeholders

In contrast, ISPs largely control the decision-making process for where to invest in broadband access. To address the poor market factors in rural areas, state and federal governments send signals for where private companies should invest via grants and low-interest loans. On the supply side, state and federal governments influence RPCs by setting priorities, providing funding for planning efforts, and establishing funding eligibility restrictions. The primary goal of the state and federal government is to increase equity by financing unserved areas that lack any broadband access. ISPs make financial investments, with and without public support, to achieve their goals of profitability. In general, ISPs influence the rural broadband landscape by making deployment decisions, determining service affordability, and influencing data quality. In some cases, the actions of the RPCs and the ISPs conflict with each other, limiting the solution space for rural communities (e.g., shifting a community from unserved to underserved can reduce future eligibility for federal funding).

There is wide variability within ISPs, which can range from large private companies to entrepreneurs to co-ops. Given the historical role and goals of co-ops to support the local community, RPCs want co-ops to expand broadband infrastructure in the same way they expanded electrical infrastructure during the first half of the 20th century (Q11, P7). However, co-ops vary in terms of their comfort with risk and some are unwilling to enter the broadband industry, given the steep learning curve required.

State and federal governments set top-down infrastructure priorities through policy initiatives and funding programs. RPCs help local governments meet the requirements and access funding to accomplish regional infrastructure goals. In most cases, this helps local governments maintain and improve traditional infrastructure (i.e., roads, water). However, in the context of broadband, state and federal efforts have come in waves, limiting momentum. For example, when the funding ran out, there was no follow through on the MoBroadbandNow initiative (Q12, P15). In addition, state and federal governments set eligibility requirements prioritizing unserved areas to achieve equity goals. However, several RPCs indicated that some companies prefer not to accept government funding due to the associated rules and requirements. Similarly, many local governments cannot help finance broadband infrastructure projects via matching contributions (Q13, P10).

The FCC publishes a broadband availability map based on data provided by ISPs (FCC, 2019a). One common critique is that areas that could be served by the ISPs within a short time period are defined as

¹ The (Q#, P#) represents the quote number by participant number. The quotes are found in the Appendix.

served. In addition, the use of data aggregation (rather than household-level data) makes it appear that a county or census block is served, when in fact, only a small portion is served (FCC, 2019b). These data are used to determine the eligibility of different geographical areas for federal funding. Sixty-nine percent (11 out of 16) of the RPCs shared their concern that these data negatively impact federal funding eligibility for some rural communities because they are incorrectly identified as served (Q14, P1).

ISPs are generally motivated to make deployment decisions based on where profitability is highest (i.e., locations with high population density). To reduce capital costs, many ISPs deploy wireless technology in rural areas. Although these wireless technologies may meet the requirements for many residential customers, they do not meet the requirements for attracting large businesses for economic development. Further, this shifts communities to being underserved rather than unserved and can reduce access to federal funding (Q15, P10). In addition, affordability can limit subscriptions and reduce the ISP's return on investment (Q16, P2; Q17, P1).

4.2. Framing RPC intentions to engage in rural broadband efforts

Themes identified from the interviews and associated with each stakeholder group are summarized in Fig. 3. Stakeholder perceptions activate specific attitudes and norms from TPB as illustrated by the arrows. This is aligned with the Theory of Reasoned Goal Pursuit, which suggests that organizational goals can counteract individual attitudes if a behavior is expected to serve a specific goal (i.e., procurement goal).

4.2.1. RPCs intentions and behavior

The planning community (see Fig. 2) includes the RPC directors and staff as well as the state-level organization, the Missouri Association of Councils of Governments. RPCs primarily describe themselves as (1) facilitators who connect different stakeholders and (2) planning experts who support local government goals with an emphasis on economic development. Although they lack rule-making authority, RPCs can leverage their power to convene. RPCs increase connections across silos

to integrate and coordinate the efforts of various stakeholders to meet a common goal and enable different stakeholders to share their knowledge and experience (Clark, Lowitt, Levkoe, & Andrée, 2020; LeoGrande, 2018). Ultimately, because RPCs sit between local and state-level governments, they are able to balance local interests with larger agendas (Q18, P7). Although RPCs primarily serve as a pull to move forward the objectives of their constituent governments, they can also act as a push to encourage local government officials to consider other viewpoints (Q19, P13). However, actual behavioral control may moderate the intention to expand rural broadband infrastructure. As predicted by the Theory of Reasoned Goal Pursuit, the RPCs' intention to expand rural broadband is directly associated with their goal to facilitate their region's economic development opportunities.

4.2.2. Attitudes toward broadband efforts

In TPB, a positive attitude, described by relative advantages and perceived complexity, is associated with a higher intention to act. As the end users of the broadband infrastructure, residents and businesses ultimately define the relative advantages of having access to the technology. The perceived difficulty of implementing and sustaining rural broadband infrastructure contributes to perceived complexity, which leads to a negative attitude about rural broadband infrastructure efforts. Of the 16 interviews, 15 participants had a positive attitude about rural broadband. The dissenting participant described that the lack of broadband had negatively impacted rural communities by reducing economic development and education opportunities. However, they did not perceive the benefits to outweigh the costs. They described an inherent tradeoff between a rural lifestyle and access to modern conveniences (Q20, P14).

4.2.2.1. Relative advantages. RPCs perceived numerous benefits to expanding rural broadband infrastructure and access, focusing on those contributing to their economic development mission consistent with the Theory of Reasoned Goal Pursuit. These advantages are listed in Table 3, which shows the number of interviews in which specific advantages were mentioned. RPCs primarily focused on advantages related to

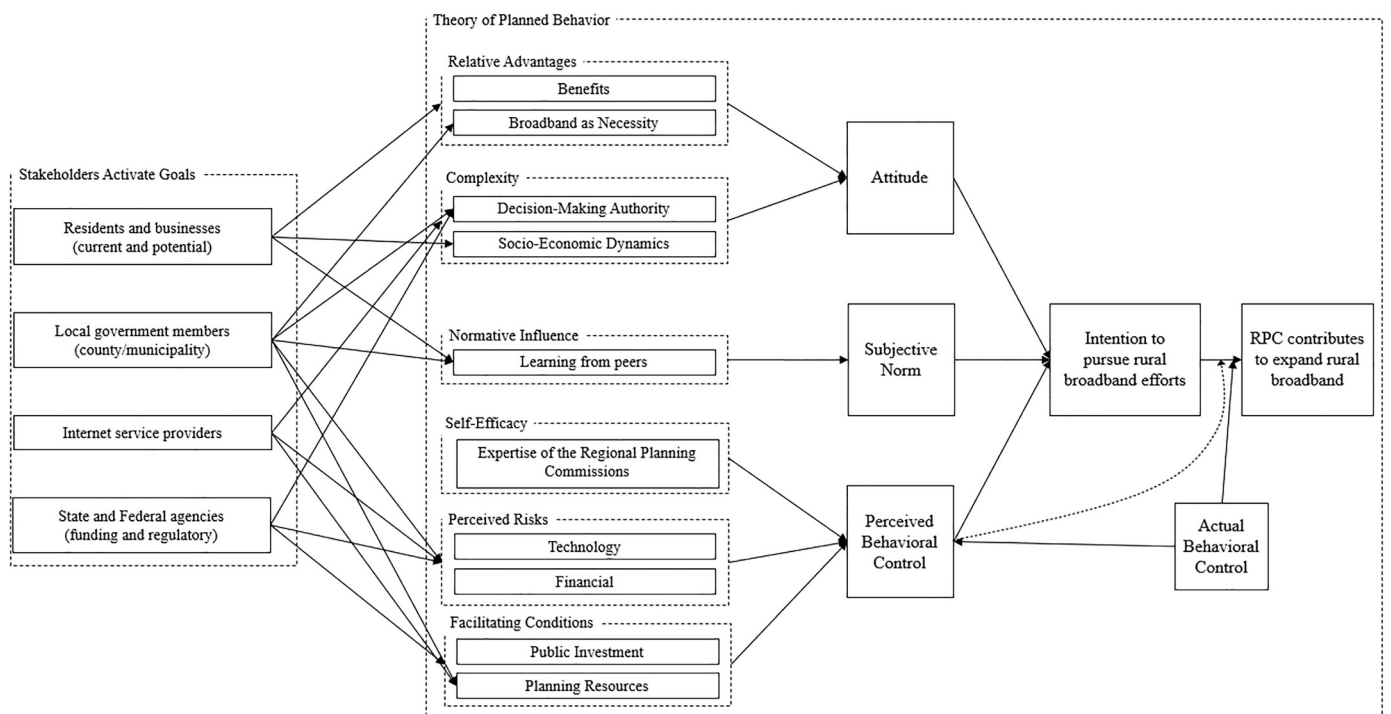


Fig. 3. Framework illustrates how the stakeholders in rural broadband influence the Regional Planning Commissions' intention to pursue rural broadband efforts.

Table 3

The frequency of perceived advantages of broadband access. Most RPCs focused on economic development opportunities to align with their goals.

Advantage	Frequency
Location desirability	13
Business Efficiency	13
Jobs	11
Education	11
Agriculture	10
Healthcare	9
Entertainment	6
Emergency services	4
Tourism	4

location desirability, business efficiency, jobs, and education.

Location desirability was frequently mentioned in the context of ensuring that professionals, families, and businesses want to live and operate in rural areas. For example, rural areas may struggle to recruit and retain high-quality professionals, such as teachers and doctors. For many people, particularly families, not having broadband access at home is a deal-breaker for moving to a new area:

“When we’re talking about community development, [the] county has a tough time, or a lot of these smaller communities have a tough time, retaining teachers. You’re trying to bring a new family to your area and then keep them there. The whole idea of thinking that you might not be able to access internet at your house, I mean that’s a ... no chance, you know?” (Q21, P13).

Similarly, RPCs are often involved in recruiting new businesses (e.g., manufacturing plants) to a region. Internet access that is acceptable for households may not be adequate for these larger economic development goals to bring in larger employers (Q22, P2).

Fundamentally, the discussion of relative advantages is focused on whether broadband is a luxury or a necessity. Some local government officials debate the need for residential broadband service in rural communities because they consider it to be more of a luxury - but residents’ expectations are changing (Q23, P14). In contrast, others focus on the long-term consequences of broadband access on economic development potential and local property values (Q24, P15). Although having some type of internet service positively impacts rural housing values, having a high-speed internet connection does not necessarily translate to a higher house value (Deller & Whitacre, 2019).

4.2.2.2. Complexity. Constraints related to terrain, decision-making authority, prioritization of infrastructure, eligibility for state and federal funding, and affordability all contribute to perceptions of complexity. In general, perceptions of high complexity (or difficulty) lead to negative attitudes about using RPC resources and capabilities to increase broadband access and adoption. For example, unsuitable terrain (e.g., hills, valleys, dense forest that restrict wireless technologies) adds complexity to the deployment of broadband infrastructure (Q25, P9).

In addition, the distributed nature of decision-making and difficulty assigning who is responsible for rural broadband infrastructure efforts contributes to perceptions of complexity. Local governments acknowledge their responsibility for other types of infrastructure such as water, wastewater, and transportation but do not universally consider broadband infrastructure to be part of their obligations (Q26, P8). In many cases, local public sector actors perceive themselves as powerless. Local communities are at the whim of companies to decide whether it is economically feasible to provide service. State and federal governments can have a role in providing and administering funding, but that is the

extent of their influence:

“Well, right now I think largely it’s the providers themselves, just a private market driven solution. If certainly the government decided to do some stimulus or something, then they’ll obviously play a role in that. But right now, I think in our area it is largely just those providers that whenever they feel like it’s time to move in a direction they do.” (Q27, P2).

The RPCs can make recommendations and encourage their local government members to address the need for rural broadband infrastructure. However, the needs for other types of infrastructure often get a higher priority versus broadband infrastructure (Q28, P3). In addition, there is significant debate regarding whether government funding should be focused on unserved or underserved areas. There is concern that only prioritizing unserved areas (as many federal funding opportunities do) ultimately further disadvantages underserved areas (Q29, P15).

Eligibility criteria can be difficult to meet, depending on the local economy. Communities may have a broader definition of industry than government funders, who want to prioritize other goals, such as American manufacturing. For example, improved broadband access can make communities more appealing for tourism, which can increase activity in the service sector and boost the local economy (Q30, P6). In addition, many state and federal funding programs require match or cost share from local communities, which is often difficult for rural areas (Q31, P10). RPCs can evaluate their local members’ situation and advise them against moving forward with a grant application that may ultimately disadvantage the community. Local governments may struggle to recover from economic recessions, compared to private companies (Q32, P11).

State and federal funding agencies and ISPs can impact the service affordability for residents and businesses. Unfortunately, affordability of broadband for rural residents negatively impacts an ISP’s return on investment and thus their willingness to invest in certain areas. More affluent rural areas have more success attracting ISP investments in broadband (Q33, P15).

4.2.3. Subjective norms about broadband efforts

RPCs’ perception of stakeholders’ expectations for engaging in broadband infrastructure expansion constitutes an integral part of the subjective norm. Each stakeholder group’s expectations are weighted differently depending on their significance to RPCs. According to the Theory of Reasoned Goal Pursuit, the ability to gain critical stakeholders’ approval is of paramount importance.

Learning about other rural communities that have broadband infrastructure available for their residents and businesses generates a greater level of interest in broadband. The act of learning from the success of others becomes a descriptive norm that reinforces intention and the behavioral means to attain it (Ajzen & Kruglanski, 2019). From the perspective of local governments and RPCs, understanding the approach used by other communities to finance and deploy the infrastructure could be beneficial. Some of the strategies used by other communities could be adapted and used for the benefit of the local communities (Q34, P3):

“So, you know, seeing those success stories and different solutions and partnerships that were formed to make them happen, that’s always, it’s inspiring, and so you want to know about those. You want to share those with the folks around this table to kind of get them thinking, you know, could we do something like that? Or maybe well we can’t do that, but we could do this, you know, that they think they kind of serve as examples to help with that brainstorming, to throw something out there that this has worked.” (Q35, P7).

4.2.4. Perceived behavioral control of broadband efforts

Perceived behavioral control refers to the RPCs' expectations that their attempts to expand rural broadband infrastructure will be successful. The RPCs' self-efficacy, the perceived risk associated with rural broadband projects, and the facilitating conditions for these projects influence perceived behavior control.

4.2.4.1. Self-efficacy. The RPCs have expertise in navigating the funding processes for state and federal agencies. However, many RPCs have limited experience supporting broadband infrastructure projects. Five of the interviewed RPCs (31%) expressed concerns regarding their limited knowledge and experience with broadband infrastructure. Although some RPCs have been involved in advancing rural broadband infrastructure, lack of experience drives concerns in this area:

"It's been in the private sector versus the public sector for so long that I don't think the public sector knows how to approach [broadband infrastructure]. [...] I know in the Northeast there's been a couple communities that have been successful. I know RPCs assisted, so I'm not saying they're not doing anything. I'm just saying, it's a new problem, and it's been given off to the private sector for so long, we don't know how to approach it." (Q36, P10).

Participants described that their limited expertise is likely leading to missed opportunities for them to assist their communities in advancing rural broadband (Q37, P6). Training, knowledge sharing, and other initiatives may be valuable for increasing self-efficacy (Q38, P3).

4.2.4.2. Perceived risks. Perceived risks negatively influence the perceived behavioral control unless adequate mitigation strategies are defined. The perceived risks are generally associated with the projects' finances and available technology. Three RPCs mentioned that broadband technology, which requires a significant capital investment, could become obsolete after a short period. This is primarily a concern for wireless technologies that are frequently deployed in rural areas (Q39, P14). The main financial risk for ISPs is an inability to achieve their expected return on investment due to low levels of adoption (Q40, P7). The availability of cheaper and better technology could enable competition and result in losses for the original ISPs.

Another technology risk is that the speeds supported by the deployed technology will quickly be inadequate. The FCC's definition of high-speed broadband has changed over the years as the bandwidth required by internet applications grows:

"And that's part of the problem with the capacity is what was acceptable five years ago and what was considered to be high-speed broadband capacity, five years later now, has grown way beyond that." (Q41, P12).

Therefore, from the perspective of RPCs, future-proofing broadband infrastructure is key – but it is unclear how to mitigate this risk, which intersects with constraints around funding eligibility. Most co-ops are focusing on installing fiber optic cable, which can provide gigabit speeds, in order to ensure a future-proof investment but this involves high up-front capital investment.

4.2.4.3. Facilitating conditions. The absence of facilitating conditions represents a barrier for RPCs participating in rural broadband advancement. However, their presence may not necessarily encourage the behavior by default (Taylor & Todd, 1995). One critical factor is the intervention of state and federal agencies that administer funding programs to stimulate broadband infrastructure deployment in rural communities. Public investment is required to improve the return on investment of ISPs and to reduce their financial risk (Q42, P15). However, all government funding mechanisms are not considered to be equally effective. For instance, grant funding is considered more effective than loans (Q43, P4). In addition, the allocation of federal funding is tied to the FCC broadband map, which limits eligibility. Many RPCs

expressed frustration about some regions not being eligible because the map shows there is broadband in the region when this is not the case. Many communities experience this same frustration throughout the US (Tibken, 2021). Some are hopeful that a solution is being worked on:

"How are you going to do a good planning without good maps and good information? We've got some efforts in Missouri that try to put better maps together, so if those work out maybe we'll have better information." (Q44, P16).

The RPCs rely on their established interpersonal network to facilitate conversations between key stakeholders such as local government officials and ISPs. In doing so, the RPCs use their convening power to achieve adequate broadband access for their regions. However, some RPCs indicated their last broadband-related project was during the MoBroadbandNow statewide initiative or that they do not have a strategy for broadband infrastructure (Q45, P16).

5. Discussion

RPC efforts to expand rural broadband access are influenced by both internal and external forces. In this study, we develop an integrated framework to demonstrate the complexity of forces both encouraging and discouraging RPCs to leverage their convening powers to build public-private partnerships, apply for state and federal funding, and engage in planning efforts to prioritize broadband deployments. RPCs intend to engage in efforts to advance broadband infrastructure in rural communities to achieve economic development goals. The priorities for the RPCs are set by their executive boards, which are usually composed of elected officials from their member governments. However, having priorities and corresponding funding being defined by the executive board may limit the RPC's ability to be effective and efficient (Seltzer & Carbonell, 2011; Washington, 2007). In TPB terms, the actual behavior control does not reside within the RPCs, and this constitutes a barrier for them to support efforts to expand rural broadband infrastructure.

The demand-side stakeholders, residents/businesses and local governments, have limited power and influence on rural broadband infrastructure investments. These stakeholders influence RPC attitudes about the benefits of broadband access, particularly in the desirability of a location for residents, professionals, and new employers. On the supply-side, ISPs ultimately decide where to make investments and are incentivized by state and federal funding to serve areas that are not otherwise economically feasible. In contrast, perceptions of complexity related to unsuitable terrain, lack of decision-making authority, prioritization of other infrastructure, eligibility issues for state and federal funding, and lack of affordability contribute to negative attitudes. Perceptions of norms are largely influenced by seeing successes in other communities and seeing what might be possible with improved broadband access as well as how they got there. However, RPCs tended to also have low perceived behavioral control. They described inadequate knowledge and expertise in the public sector, technological and financial constraints, and inadequate public investment.

The integrated framework proposed here can support the development of interventions to reduce broadband planning barriers, which can be tested in future research. For example, it could be valuable to improve perceived behavioral control by increasing self-efficacy via interventions that increase knowledge and experience related to broadband. This could be a "broadband curriculum" to ensure all RPCs and other stakeholders (e.g., local elected officials) have a baseline understanding of broadband technologies. For example, the University of Missouri System has launched a "Digitally Connected Community Guide" course to provide training and guidance for community stakeholder groups, including public officials (Mobroadband.org, 2021). Additionally, there could be value from decision tools such as benefit-cost-risk analysis to support efforts to prioritize broadband infrastructure (Valentín-Sívico, 2020). Providing tools and support for the public sector may improve communities' abilities to advocate for themselves

and realize the public-private partnerships that are needed for successful rural broadband deployment.

In addition, this framework can be generalized and adapted to study behaviors of other organizations that face similar stakeholder dynamics and convening power, such as business improvement districts, community-based organizations, and economic development corporations (Abrams, Davis, & Moseley, 2015; Bauroth, 2009; Morçöl & Wolf, 2018). Most of these organizations are nonprofits with public governance and are controlled by publicly-appointed directors (Mead & Warren, 2016). There is growing interest in understanding the role of regional intergovernmental organizations and how they influence regional outcomes (Miller, Nelles, Dougherty, & Rickabaugh, 2018). This framework can also be applied to emerging technologies, such as autonomous and electric vehicles, which require coordination between public and private actors to ensure sufficient infrastructure access.

There are two primary limitations to this work, which can become the basis of future work. First, the data are limited to Missouri and may not generalize to other states, particularly those outside the Midwest. For example, other states, such as Colorado, Maine, and Minnesota, have more robust state-level funding and planning support (de Wit & Read, 2020). In addition, the data were collected pre-COVID-19, and many of these dynamics may have since shifted or become more extreme. The COVID-19 pandemic dramatically shifted public sentiment regarding the importance of broadband access and fewer are likely to perceive it as a luxury. Future work should compare how RPCs are interacting with various stakeholders groups to support rural broadband expansion across states and over time to identify effective planning processes for new infrastructure.

6. Conclusion

Facilitating organizations, like RPCs, play a crucial role in navigating bottom-up vs. top-down priorities for infrastructure expansion, but they range widely in terms of outcomes, abilities, and institutional power. The proposed integrated framework reveals the dynamics and challenges contributing to this heterogeneity. Rural broadband planning involves many stakeholders, who could benefit from collaboration (e.g., public-private partnerships) but there are often few incentives to do so.

Appendix A. Participant quotes

Participants' quotes in support of our findings and observations. (Q#, P#) represents quote # and participant #.

(Q#, P#)	Quote
Q1, P8	So, when you're talking economic development and business attraction and talent attraction, that's where we've got to get to or we're going to be sitting here with cable broadband while our neighbors have fiber and they're 30 min away. Where are folks going to live, work, and play?
Q2, P1	I think for rural broadband, small towns are drying up. They're losing population because they're moving to another town that has it [broadband service]. They like the small-town way of life, but they want the utilities and the conveniences, and they want the connectivity with the rest of the world. And so, if they see it in another town, they're moving to the other town.
Q3, P3	Well, I think [broadband is] important for our farmers. There's fewer and fewer of them. More and more land that they're trying to farm, that they need to, to make a profit. I think it's having the infrastructure for them, so that they can do precision ag in some of these areas.
Q4, P16	From an economic development standpoint, it just has ... the ability to work from home for folks. That's something that can change society and so if you can do your same job working wherever ... Just to keep rural America thriving, people don't feel like they have to live in a big city to have a good job, they're just going to work from home. If you're going to work from anywhere with a good internet connection, you can live in rural America too to have that, so I think that's just one of the big benefits.
Q5, P5	Also in those rural communities, more and more of their healthcare options are going away, so the nearest hospital may now be an hour away from them. So, it makes it more difficult for them to get healthcare, whereas if they had access to broadband internet, then they could have access to telemedicine where they can just video conference with their doctor instead of having to drive an hour to see their doctor.

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For example, local public sector actors struggle to find private sector partners and prioritize efforts (Falch & Henten, 2010). In addition, local governments often have limited financial resources to provide cost share.

As local governments re-evaluate their priorities and look for opportunities to take advantage of additional federal funding (e.g., 2021 Infrastructure Investment and Jobs Act), RPCs will likely be much more involved in broadband infrastructure projects within their region. Funding that supports planning, like the the NTIA's Broadband Equity, Access, and Deployment (BEAD) Program fills a gap for these organizations. Ultimately, RPCs are likely to play an important role in expanding rural broadband efforts as public pressure for access and available funding increases.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

CRediT authorship contribution statement

Javier Valentín-Sívico: Conceptualization, Methodology, Formal analysis, Investigation, Data curation, Writing – original draft, Visualization. **Casey Canfield:** Conceptualization, Methodology, Formal analysis, Investigation, Writing – review & editing, Supervision, Project administration. **Ona Egbue:** Conceptualization, Methodology, Formal analysis, Investigation, Writing – review & editing, Supervision.

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(Q#, P#)	Quote
Q6, P7	This is a beautiful area to live in with the rivers and the streams and just the natural beauty, slower pace, ... there's the opportunity for folks to live here and do business here, you know, from home. So, the economic benefit is that they could work here and live here and earn a good living, you know, through the internet.
Q7, P2	[Our communities] look around, and they see what other communities our size are doing in whatever it is. ... So, I think there is certainly some influence. I think if our community saw that somebody of similar context was successful in either ... building out some infrastructure on their own and it's the publicly owned infrastructure, or they had come up with some way to attract a private provider to come in, I think they would take note of that.
Q8, P7	In some of our counties, we do have a little older population, and they're probably going to be less likely to jump on the [broadband] bandwagon. [...] Our ability to attract younger folks to the area is limited without it because that's an expectation.
Q9, P3	I see that's something that cities and counties, communities ... roads, bridges, water, sewer ... They're more willing to invest in and have that local, whereas they know fiber, somebody else, like [an ISP] ... Somebody else is going to come in and do that. And be responsible for it.
Q10, P5	The rural communities, they don't have the population base that the urban communities do, which means their tax base is smaller, which means they just don't have the money to do those types of infrastructure projects. I think a lot of them still see broadband internet access as a luxury, not as a necessity. So, I feel that they are often more focused on what they deem as necessities, such as basic utilities and city services, streets, air, and all those basic things.
Q11, P7	I think the cooperatives have a role to play, too, and I guess that's kind of where they have the network in place in my mind. I really liken this to the electrification of America quite frankly. That it was through those groups and federal resources that they were able to come together and do that. I think it's going to take that similar type of effort to really get us, you know, to have broadband to the same level that we have electricity, really.
Q12, P15	We did do broadband planning, but the funding was specific for this plan, and they didn't have any kind of contingency or continuity planning for the broadband to continue moving forward.
Q13, P10	Well, the cities are worried about taking on any new financial risk. The carrier is worried about not getting a return on their investment. Then as far as the grant side, it's hard to convince a private sector company to move forward with a federal funding application, because they're concerned about what strings are attached to that federal funding. [...] The other thing is, federal grants are reimbursable, so for a very small company with such large amounts of money, do they have the money to move forward first?
Q14, P1	One of the problems that we had with MoBroadbandNow, is if a provider could install within a week to your community, you are also considered served. And that is ... well, it was a fallacy in my mind. Because with that statement, and with that mindset, and really that definition of broadband connectivity, I mean that's the other part of why the map is skewed, because technically they could have, but they decided not to.
Q15, P10	Right now, we have a lot of small telcos moving in wanting to do fiber backbones but then do primarily wireless service. That can actually take us out of those federal funding opportunities too, because now they have service, but it's still not good enough service for economic development. It's not good enough service. It's not going to give you the kind of upload speeds you need for certain business.
Q16, P2	You're talking about again, economically depressed areas. Serving them broadband is just going to be very expensive on a per customer basis, and you're dealing with individuals who just don't have a lot of income. It's going to be difficult to pay \$100 or something for high-speed internet. So, then how do the providers finance getting that out there at a price that people can afford but not lose their business over the cost? I think it's just basically how do you get it out there and charge a rate that is even close to reasonable?
Q17, P1	There's a ceiling on how much people can afford to spend, especially in the rural areas, on broadband. Yes, it's not water and sewer, it's not the major infrastructure that's needed, it's on the leisure side for some things. But if it comes down to it, are they going to pay for their water bill, their sewer bill, or their broadband bill?
Q18, P7	So that's kind of been more our role, has been more in the convening and making sure the right people are at the table and knowing where the gaps are and where the opportunities are.
Q19, P13	Because, like I said, some of these counties and county commissioners in this area are retired farmers. They are not really sure what they're getting into and not very progressive. So, it's like trying to push, "Hey, this is what you need to be thinking about. This is where your eyes, where your mind needs to be at for this," and trying to push them forward with progressive thoughts and trying to get the county or city or whatever moving in the right direction.
Q20, P14	So, we try to have the best of both worlds. We want to live down by the river, we don't want it to flood, and we want color TV, and we want five-minute ambulance response time, and we want high-speed, fast internet at \$25 a month. You're not going to get it. So that's reality... It's not a good proposition to put high-speed affordable broadband in rural areas.
Q21, P13	When we're talking about community development, [the] county has a tough time, or a lot of these smaller communities have a tough time, retaining teachers. You're trying to bring a new family to your area and then keep them there. The whole idea of thinking that you might not be able to access internet at your house, I mean that's a ... no chance, you know?
Q22, P2	One of the big benefits is ...the economic development, being able to attract industry that needs that high-speed internet because they're transferring massive files and plans.
Q23, P14	I'm going to call it a luxury; for a lot of people. Because they don't use it for their business, they don't use it for health-related reasons [...] You had a dirt road when you moved here. You didn't have broadband when you moved here.

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(Q#, P#)	Quote
Q24, P15	I'm looking at broadband as a utility. So, it's just like electric, everyone needs it nowadays. You might as well just say, 'If your house doesn't have broadband, you're going to have a harder time selling that piece of property.' It's just like you have an outhouse instead of a bathroom in your house.
Q25, P9	A major reason of why we're not getting broadband access is because we are hilly, and we have a lot of trees. And so, it's hard for the people to get a tower to reach a lot of homes. And so, the cost per home is so high, that nobody will take the risk.
Q26, P8	Well, I think also our local governments, I think they accept that they should be responsible for basic utilities, to the extent that they are able such as water, wastewater, roads and bridges and that sort of infrastructure. So as far as decision making, I think they would like to see broadband in their communities, but they don't feel that is a city or county owned idea. It really takes someone with that level of expertise to come in and provide.
Q27, P2	Well, right now I think largely it's the providers themselves, just a private market driven solution. If certainly the government decided to do some stimulus or something, then they'll obviously play a role in that. But right now, I think in our area it is largely just those providers that whenever they feel like it's time to move in a direction they do.
Q28, P3	Not that we don't think it's important, but compared to sewer, water, things that communities have to deal with and pay for, those tend to take precedence. And those projects never seem to be in short supply.
Q29, P15	And I know there's areas that have no service at all. But if we focus, as a state, if we focus on those areas that have no service at all, I don't feel that this broadband initiative is going to be successful. We also need to look at areas that are underserved or may have service but only one provider. Because it is a statewide issue. It's not just those areas that have no service.
Q30, P6	We had started to look at working with [local ISP] on a grant for last year to get internet at the campgrounds. But our challenge was ... to identify a business that would be using the internet. ... it had to be like a light manufacturer and around the lake, there's just not any around the lake. I mean, it's all tourism-based. And so, we couldn't move forward with that project because we couldn't identify any businesses that would benefit from it. You had to have that business benefiting, and then if the tourist, or the people that were camping, benefited, okay, well, that was just an add-on. But we couldn't find a business that would benefit, so we couldn't move forward with it, so that was unsuccessful.
Q31, P10	I have one small city that qualifies for these grants, but they currently have trouble even paying for their current infrastructure and maintaining it. Everything, streets to their water, it's bad. They're like, we want to apply for this! I'm like, no. You qualify, but mm-mm, negative.
Q32, P11	Because if they have a downturn, there's usually some money over here in reserves. Or they go bankrupt, and somebody buys them. You know? Or it's the market whereas the public entity is not market based.
Q33, P15	...if we didn't have the affluent community, the retirement communities, would they [local co-op ISP] have been able to deploy it throughout their entire region? Because they cover a large section of the lake area where we have those million-dollar, multimillion-dollar homes. And that's also one of the other questions I have in regards to the other co-ops. What do their consumers look like? Are they a more affluent consumer, or are they really more of the middle or lower class consumers that wouldn't be able to buy into that one gigabyte even if it was available?
Q34, P3	A year or two ago, [we] went to [the] American Planning Association Conference. ... There were several communities up there that talked about how they did broadband, ... And so, it did give me some opportunities to go back and say, "Okay, this is how another community does this. Have we considered this as a group, that that might be an option for a community?" ... I think there is tremendous value in that, in networking, and looking at how others have done it because there's no sense of recreating a path if somebody's had a successful formula, if you can use it. It doesn't always work that way, but at least it gives you an idea and a frame of reference.
Q35, P7	So, you know, seeing those success stories and different solutions and partnerships that were formed to make them happen, that's always, it's inspiring, and so you want to know about those. You want to share those with the folks around this table to kind of get them thinking, you know, could we do something like that? Or maybe well we can't do that, but we could do this, you know, that they think they kind of serve as examples to help with that brainstorming, to throw something out there that this has worked.
Q36, P10	It's been in the private sector versus the public sector for so long that I don't think the public sector knows how to approach [broadband infrastructure]. [...] I know in the Northeast there's been a couple communities that have been successful. I know RPCs assisted, so I'm not saying they're not doing anything. I'm just saying, it's a new problem, and it's been given off to the private sector for so long, we don't know how to approach it.
Q37, P6	You know it's probably ... there may be funding for broadband, we're just not tapping into it. So, for us, water and wastewater projects, general infrastructure projects, even streets, and that, is that we're so familiar with those type of projects, and just not familiar with broadband enough to go after funding. So it may be that there's spending out there. We just haven't tapped into it.
Q38, P3	We have several members of our economic development community who, I think, are more focused on broadband than probably we are. [...] Now, they're trying to pull me along, catch me up. So, we're saying we need things like broadband 101 to educate community city officials, just to even understand the terminology.
Q39, P14	How do we know investing millions of dollars in a technology that we know now isn't going to be obsolete five years from now? I think that's a huge factor that people hesitate on now. I think that they don't know how long the most current and successful technology is going to be that state-of-the-art technology, until something else comes along and makes that investment obsolete. Where it's, "Gosh. I wish we would've waited two years. We would've had so much faster, with less investment".
Q40, P7	Right now, I think it's really coming down to the numbers. I think it's very much of a, you know, number of people who want it, are willing to pay for it and what's it going to cost. And that's going to come out in the black when all is said and done.

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(Q#, P#)	Quote
Q41, P12	And that's part of the problem with the capacity is what was acceptable five years ago and what was considered to be high-speed broadband capacity, five years later now, has grown way beyond that.
Q42, P15	There is some support for public investment. I think there's opportunities in the public investment because we're relying solely on the private sector now to provide this, and they're not willing to provide it in areas that they don't have that return on their investment. So, I think that the public involvement is going to be necessary.
Q43, P4	Most important is to provide seed grant funding so that the first steps can be taken with lower risk to the companies that have the best chance of sustaining those internet access efforts. Providing loan money as part of the enticement to invest is not adequate.
Q44, P16	How are you going to do a good planning without good maps and good information? We've got some efforts in Missouri that try to put better maps together, so if those work out maybe we'll have better information.
Q45, P16	No. I hate to admit this, but we really don't have a strategy for our region, honestly. We should, in theory, go through a planning process, or two planning processes. Nobody seems to be leading the effort, and the companies or co-ops are doing what they want to do.

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