

Book Review

Christopher Ali (2021). *Farm Fresh Broadband – The politics of rural connectivity*. MIT Press: Cambridge, Massachusetts, USA

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For many of us, our working and daily lives would be unimaginable without broadband. A broadband connection opens up a range of possibilities, from working at home to remote education and watching streaming services. But not everyone has access to a broadband connection, and even when they do their quality can vary significantly. This book examines broadband in rural America, exploring how the digital divides that exist can be overcome to how those who live and work in this part of the United States can benefit from it.

After a short ‘Series Forward’ by Sandra Braman, which highlights the main themes of the volume and importance of connectivity, there is a relatively long set of introductory comments (pages 1 to 39 inclusive) that are, perhaps inevitably, broad in scope. There are a few pages describing the technologies, fixed and wireless, that can be used to provide connectivity, as well as a couple more exploring the notion of rural – both sets of comments are necessary, and arguably are sufficient in depth and scope for this particular book. In contrast, the handful of pages devoted to outlining critical political economy, the theoretical tradition that the author draws on, could have been expanded. One advantage of doing so would have been to illustrate the richness of this tradition and thus its usefulness analytically, while another would have been to begin to demonstrate the complexity of broadband policy in the United States in general and rural America in particular.

From the rest of the introductory comments, three observations can be made. Firstly, connectivity in general and broadband in particular is transformational in nature. There are, in other words, significant socio-economic benefits associated with providing broadband connectivity. Secondly, doing so within a rural context is challenging, not only economically but also in terms of creating a policy environment that mobilises the necessary resources to tackle the digital divides that exist. Thirdly, co-operatives play an important role in the provision of infrastructure, electricity and telecommunications, across rural America.

Large parts of Chapter One (pages 41 to 65 inclusive) are historical in nature as the evolution of electricity and telecommunication networks in rural America is charted. The inclusion of electricity is useful not least because there is a tendency in the literature to focus solely on telecommunication networks and not to look at another network industry that shares many similarities in terms of the challenges it faces in rural areas and the socio-economic impact that it brings. Although both descriptions cover a lot of material in not that many pages, which sometimes results in points being made too briefly, they show the impact of market failure on the electricity and telecommunication industries and how various federal initiatives have sought to support the provision of these networks in rural areas. Politics also plays a (key) role; politicians can champion support for schemes to support rural provision but they can also shape these schemes, limiting the funds that are available and how they are spent.

Chapter One ends with a conclusion that identifies six lessons for rural broadband. To a reader familiar with debates around broadband provision in rural areas, these lessons are largely unsurprising but if the reader is unfamiliar then they are a useful summary of the chapter. Having said that, it is worth drawing attention to the first three lessons identified as they create a line of argument – ignored by large providers, local communities took the provision of electricity and telecommunication networks into their own hands through creating co-operatives - that can be seen, sometimes more explicitly than others, throughout the rest of the book.

In Chapter Two (pages 67 to 99) attention shifts to rural broadband policy. The critical assessment, which is hinted at in the subtitle of the chapter, is extensive and is presented under four themes: management, meaning, money and mapping. In the first of these themes one of the key arguments that is made is that local ownership options have been downplayed in a federal broadband initiative, while another is that the United States lacks a coherent broadband policy. The second theme draws attention to the various speeds that are attributed to a broadband connection, as well as the role of technology – copper, fibre, wireless and satellite – in shaping debates and policies. Defining broadband in terms of lower speeds may widen the range of technologies that could be deployed, but it also negatively impacts on the user and places them at a disadvantage vis-à-vis those with faster connections.

The third theme that is discussed is money. A lot of points are made in rapid succession. Significant sums are spent, via a series of mechanisms, to support the provision of telecommunications network in rural areas. Sometimes this money is spent supporting rollouts that do not go to plan, while on other occasions the network provided offers ‘just’ baseline (i.e., 25/3) speeds. Structuring the discussion around the various programmes provides the reader with a sense of repeated problems being encountered and limited learning occurring between each of them. Table 2.3 (page 86) is a useful summary of the discussion, but the text would have benefited from more instances of the integration of arguments.

The final theme is mapping, with the critique structured around three flaws that collectively illustrate the challenges inherent to the process. Although there is a degree of cross-reference between the four themes, more could have been done in this respect – the conclusion partly corrects this, but it is relatively short and the interactions warrant further elaboration. Having said that, the conclusion argues that the four themes underpin “a recurrent and dominant politics of good enough” (page 98). This, it is argued, justifies the “deployment of subpar technologies, massive subsidies to incumbent providers and a lack of accountability” (page 98) before it is stated on the next page that rural America has suffered from the “politics of neglect”. The juxtaposition of these two observations requires further elaboration because the latter will, to a greater or lesser extent, shape the former – neglecting rural America results in a willingness to deploy ‘subpar technologies’ that places those using them at a disadvantage.

Regulators play a key role in industries like telecommunications. In Chapter Three (pages 101 to 127), by focusing on the Rural Utilities Service, the complexity of regulation, where multiple stakeholders influence policies and initiatives, as well as its dynamism, is vividly illustrated. The regulatory landscape outlined in the chapter is composed of multiple agencies, which complicates matters through overlapping remits and coordination challenges. Although the politics of regulation come to the fore, there are other topics mentioned in the chapter that are worth noting. Firstly, there is the critique of the Rural Utilities Service that criticises its operations (pages 107 to 109), while secondly there is the issue of funding overbuild when the money could be directed towards improving existing networks (pages 110 to 113).

Thirdly, there is the issue of legitimacy. Multiple perspectives on legitimacy are described (pages 113 to 126) that not only demonstrate the evolving role of the Rural Utilities Service but also suggests the numerous challenges that it faces. At best it must juggle multiple, sometimes contradictory roles, while at worst circumstances force it to favour one (or a few) of its roles at the expense of the others – and those it

interacts with may focus on one of its roles, sidelining the others and thus questioning its legitimacy. Not only is the discussion of 'stakeholder analysis' (pages 122f) brief but, perhaps more importantly, is not as well integrated with the arguments presented elsewhere in the chapter as it needs to be to ensure that the points are clearly made and well supported. This partly, but not entirely, detracts from the veracity of the arguments being made.

Over the course of the first ten pages of Chapter Four (pages 129 to 161), a lot of points are made. This rapidity can be distracting though some points are, reflecting earlier discussions in the book, more important than others. People and place matter; people use broadband and without this use its benefits are not realised, while place, in terms of its physical and socio-economic characteristics, influences technologies that be deployed and the interest and willingness of large telecommunications providers to build (broadband) networks. Localism also matters, in terms of debates around whether municipalities can deploy and operate broadband networks, where decisions are made and the contribution that cooperatives can make.

The bulk of the chapter is a case study of Rock County, Minnesota. The case study illustrates how infrastructure is provided and the changes that have occurred since 2009; initiatives have been designed, funding obtained and then delayed or lost, legal problems encountered and overcome, and the interest of companies in providing broadband fluctuated. While private companies play a role in broadband deployed, so do cooperatives – significantly, cooperatives recognise that a return on investment occurs over the longer term (page 147), and that they are accountable to a local community (page 148).

Another important issue raised by the case study is the availability of fibre. Fibre deployment naturally lends itself to more densely populated areas, yet Rock County required that it would be available across the county (page 151). There are cost, financing and deployment implications of this decision that needed to be addressed, but it did provide 100/20 connectivity across almost all of Rock County (page 154). Largely overlooked in the case study is a discussion of uses that individuals and businesses put their fibre connections to, though it is suggested that improved connectivity attracted inward investment into Rock County.

Chapter Five (pages 163 to 189) explores the interplay between two sets of activities, namely, agriculture and digital technologies. Digital technologies can be applied across the agricultural sector, transforming, for instance, how crops are sown, monitored and managed. Within the digital technologies that can be used, and which are increasingly found within the equipment that farmers use, broadband is one among several. It is shown that a range of technologies are used by farmers to access the Internet, though many of them are unsatisfactory (page 171). As a consequence, farmers will struggle to apply the digital technologies that are available. Although it is stated that this is widely acknowledged (page 173), it is not clear how this translates into meaningful policy initiatives that tackle the digital divides faced by farmers. 5G is mentioned at the end of the chapter, but not very positively – not only is the technology hyped, but it will take several years before it is available. Though this could be dismissed as reflecting when the book was written, it is worth remembering that the rollout of mobile networks takes many years and the proportion of the population covered is often ahead that of the geography. This disadvantages rural areas.

The book ends with a conclusion whose title – “Everything is better with better broadband: Toward a national rural broadband plan” – aptly summarise its contents (pages 191 to 205). The first half of the chapter makes the case for better broadband, noting how Covid-19 illustrated the necessity of connectivity and the benefits and opportunities that accrue. It is also argued that although the pandemic created an opportunity for political action, what emerged was considerably less than what was needed to provide connected (page 195). But will new technologies not save the day and provide connectivity across rural America? No. While the promise of 5G is highlighted, so are the challenges associated with its deployment

(page 197) – interestingly, it is suggested that the slow roll-out of 5G may result in rural communities delaying their own initiative as they wait for this aggressively hyped technology to be deployed (page 198).

LEOs may have a role to play in providing connectivity to rural America, with the speeds being delivered by Space X in trials being over 100 Mbps (page 198). While this is criticised as being less than promised, it is still better than many in rural communities would receive from existing (fixed) technologies – ‘better’ in the chapter title is relatively, something is better than nothing. In other words, LEOs based broadband may not be as good as a fibre-based connection, but if the choice is between nothing or dial-up and 100 Mbps via a satellite, then the latter is better. Arguably overlooked in the conclusion is the distinction between providing connections across rural America that enables communities to thrive and prosper, and then ensuring that they do not fall behind as technologies advance.

A key component of the second half of the chapter is the proposal of a national rural broadband plan (pages 199 to 203). This plan should be developed by the United States Department of Agriculture (USDA) largely because of its existing connections with rural communities (page 200), taking into account a number of recommendations (page 202f) that reflect the arguments made throughout the book. It is acknowledged that the USDA would operate in a multi-agency environment, not least because tackling the urban rural digital divide requires a wide-ranging set of tasks to be undertaken. This is described as a “all-hands-on-deck” approach (page 203) but the overlooked danger here is that coordination issues and institutional rivals may emerge – to quote another cliché, “too many cooks spoil the broth”.

The chapter ends with a short section whose arguments can be aptly summarised with two key points: “everything is better with better broadband” and “broadband is not about policy, politics, technology, or money; it is about people” (page 205). Not only can both of these quotes can be viewed as encapsulating the arguments made throughout the book, but they also hint at the enthusiasm of the author for the issue(s) addressed in the book, which is sometimes hidden but often not. This enthusiasm helps explain the whistle stop tour nature of the volume, which covers a lot of issues in not that many pages – the brevity of some of the discussions needs, however, to be set against the coverage of issues on the one hand and the links made between them on the other hand.

The coverage arguably makes this book attractive to those unfamiliar with some or all of the debates that it touches on, as does the style and tone adopted. However, for those unfamiliar with relevant debates more explicit links would have been beneficial – not only would this have helped the reader, but it would also illustrate the complexity of providing broadband across rural America. This complexity is only partially reflected in the discussion of the national rural broadband plan; occurring more at the start of the section than at the end where a series of recommendations are made (pages 202f). A valuable contribution, useful to the reader, would have been an evaluation of the feasibility of the recommendations that are proposed – are some of the recommendations less contentious than others and thus easier and/or quicker to implement, or do the recommendations need to be implemented in a particular order to maximise the chances of any plan that emerges being successful?

In summary: this is an enthusiastic call for broadband to be made available across rural America. The volume touches on a lot of issues, in varying degrees of detail, to illustrate the benefits of bringing broadband to rural America but also the myriad of challenges and obstacles that need to be overcome before this can happen. In places the arguments would benefit from elaboration but the increase in length that would result are likely to make the book less attractive and increase its price. At the moment, the paperback version is relatively inexpensive, which is welcome.