

## Inequalities in Payment Innovation Adoption

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In general, it is believed that innovations accrue a net benefit to society. Yet, at a disaggregated level, some segments in society may experience more of the benefits (e.g., early adopters) while other segments either incur the relative increase in costs of legacy systems or forego the benefits associated with use of the innovation (e.g., late adopters and laggards). Academic research tends to focus mainly on the early-stage adopters, without whom it is assumed new products and services would not progress to the higher levels of volume associated with positive returns on the innovation investment (Fisher & Price 1992). Non-adopters, on the other hand, have rarely been studied, which Rogers (2003) attributes to a “pro-innovation bias” amongst researchers. While new products tend to become more affordable as adoption takes place, we must consider products that, due to technological underpinnings, might exacerbate problems for certain vulnerable populations already associated with the lack of technological access.

This paper explores the adoption of technologies by which consumers pay for goods and services. A payment option is a store of value that parties mutually agree will complete the settlement of a claim or transaction (Angel & McCabe 2014). These take the form of digital or electronic products such as ACH payments, credit and debit cards, and online payments. The movement toward a “cashless” society (Arvidsson, 2019) will necessarily limit the payment choices consumers have as reduced use of cash increases the costs of handling and providing access, which then further puts downward pressure on usage (Engert et al., 2018). Those without access to electronic means of payments will bear these increased costs.

The “digital divide” generally indicates the distinction between those that use information technology and those who do not. van Dijk (van Dijk 1999; van Dijk & Hacker 2003) outlines the issue as a function of access; not just the physical access to the technology and the opportunity to use it, but the access to the necessary skills for usage. Underlying these access issues are several demographic factors, particularly those related to race (Fairlie, 2004), age (Niehaves & Plattfaut 2014), income (Martin & Robinson 2007), and level of education (van Deursen et al., 2015).

Using data from the 2019 Survey of Consumer Payments Choice (n=3372) (Federal Reserve Bank of Atlanta, 2020), we provide initial evidence that vulnerable groups might lack the access and/or skills to take advantage of digital payment technologies. Initial evidence shows that low income, less educated minority Americans do not adopt electronic payments at the same rate as those Americans who have more resources and opportunities available to them. While it is hoped that increased volume in these alternatives reduces costs, the cost differential will be borne by those already paying a “poverty premium” (Finney & Davies, 2020) and further exacerbate economic inequality. To mitigate the existing differences, policy recommendations should focus on facilitating access and increasing communication/education for specific population segments identified above.

### References

- Angel, J. J., & McCabe, D. (2015). The ethics of payments: Paper, plastic, or bitcoin? *Journal of Business Ethics*, 132, 603-611.
- Arvidsson, N. (2019). Building a cashless society. *Springer Briefs in Economics*. Springer: Cham. [https://doi.org/10.1007/978-3-030-10689-8\\_4](https://doi.org/10.1007/978-3-030-10689-8_4)
- Engert, W. Fung, B. & Hendry, S. (2018). “Is a cashless society problematic?” Bank of Canada Staff Discussion Paper. Retrieved from: <https://www.bankofcanada.ca/2018/10/staff-discussion-paper-2018-12/>
- Fairlie, R. W. (2004). Race and the digital divide. *Contributions in Economics Analysis & Policy*, 3, (1), 1-38.
- Federal Reserve Bank of Atlanta. (2020). *2019 Survey of Consumer Payment Choice*. Retrieved from <https://www.frbatlanta.org/banking-and-payments/consumer-payments/survey-of-consumer->

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- [payment-choice/2019-survey](#).
- Finney, A., & Davies, S. (2020). From headline statistics to lived experience: A new approach to measuring the poverty premium. *Social Research Practice*, 9(Spring), 4-16.
- Fisher, R., & Price, L. (1992). An Investigation- into the Social Context of Early Adoption Behavior. *Journal of Consumer Research*, 19(December), 477-486.
- Martin, S., & Robinson, J. (2007). The income digital divide: Trends and predictions for level of internet use. *Social Problems*, 54(1), 1-22.
- Niehaves, B., & Plattfaut, R. (2014). Internet adoption by the elderly: Employing IS technology acceptance theories for understanding the age-related digital divide. *European Journal of Information Systems*, 23(6), 708-726.
- Rogers, E. M. (2002). *Diffusion of Innovation*, 5th Edition, New York: Free Press.
- van Deursena, A., van Dijk, J., & ten Klooster, P. (2015). Increasing inequalities in what we do online: A longitudinal cross-sectional analysis of Internet activities among the Dutch population (2010 to 2013) over gender, age, education, and income. *Telematics and Informatics*, 32, 259-272.
- van Dijk, J. (1999). *The Network Society: Social Aspects of New Media*, Thousand Oaks, CA: Sage.
- van Dijk, J., & Hacker, K. (2003), The Digital Divide as a Complex and Dynamic Phenomena. *The Information Society*, 19, 315-326.