Cryptocurrencies: Spillover Effects of Open Innovation
by
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Abstract: The majority of cryptocurrencies follow an open innovation model, wherein the open boundaries facilitate copying (forking) the codebase and creating new products, which may compete with the parents for user demand and developer attention. While a rich body of literature highlights the benefits of open source such as the availability of developers with diverse skill sets and accelerated innovation, the effects of competition due to forked products remain understudied. Using a data set on major cryptocurrencies and their forked products created between 2011 and 2018, we study how these substitutes impact the demand and the development activities for the parent cryptocurrency. We find that parent coins experience an increase in demand in the short term. However, in the long term, parents with only transaction capabilities experience a negative impact on demand. We also find that a large installed base of the parent coin such as Bitcoin does not help reduce these substitution effects. However, coins enabled with platform capabilities such as Ether witness increased demand in the long term, which can be attributed to the network effects associated with services and applications tied to these coins and compatibility with the competing forked products. On the development side, we find that contrary to closed settings where incumbents experience a migration of developers, forks attract new developers and increase participation among existing developers for popular parent coins. Our results underscore the competitive dynamics of open innovation for demand and development and provide managerial insights for firms assessing open models for product development.

Bio: Ms. Vasundhara is a 5th year Ph.D. student in the Information, Risk, and Operations Management department at McCombs School of Business, The University of Texas at Austin. Her research interest lies in open innovation and decentralized applications. Specifically, she is interested in cryptocurrencies and blockchain applications. Prior to UT Austin, she worked at Goldman Sachs and holds a bachelor’s degree in Computer Science.