Complexities of competition regulation in Zimbabwe's mobile money sector

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Abstract
This study explores the complexities of competition regulation in Zimbabwe's mobile money sector—through an analysis of EcoCash's market position and practices, and the regulatory steps taken in response. The study is grounded in the competition complaint made in 2014 by Zimbabwean banks against EcoCash to the Competition and Tariff Commission (CTC), wherein EcoCash was alleged to have initially refused to share its unstructured supplementary service data (USSD) infrastructure with banks; and then later to have granted access only on discriminatory terms. The research assessed the market structure and market power in the Zimbabwe mobile money sector; the regulatory challenges that these market features pose; the market power and conduct of EcoCash; and the effectiveness of the measures taken by regulators to address the competition concerns raised in relation to EcoCash. The findings indicated that, in spite of regulatory attempts to dilute its power in the market, EcoCash was, at the time of the core data collection in 2021–22, still in a dominant position in Zimbabwe's mobile money market.

Keywords
mobile money, competition regulation, network effects, market power, market dominance, Zimbabwe, EcoCash

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1. Introduction

Mobile money services enable people to send, receive, store, and spend money using a mobile handset connected to a mobile network using a SIM card issued by a mobile network operator (MNO). Mobile money has become popular in historically unbanked segments of society, with users finding it a convenient and safe way to conduct financial transactions without using a bank account (Anderson, 2010). Meanwhile, mobile *banking* services enable a person to access their bank account, and conduct essential transactions, including money transfers, via banking applications installed on their mobile handsets. In cases where an MNO has a banking partner or partners, a mobile money service has the potential to evolve into mobile banking. In Zimbabwe, mobile money and mobile banking platforms have grown rapidly, generating a particular set of competition dynamics. For example, banks depend on the unstructured supplementary service data (USSD) infrastructure provided by MNOs to offer mobile banking services to their customers, and thus refusal by MNOs to provide this service on fair terms infringes on competition in the provision of mobile financial services.

Zimbabwe has three MNOs: Econet, NetOne, and Telecel. In December 2022, Econet was the largest MNO with 68% market share, followed by NetOne at 29% and Telecel at 3%.[1] The three MNOs all commenced mobile money services in 2011, as EcoCash, OneMoney, and Telecash respectively. In 2012, the banks established the ZimSwitch Instant Payment Interchange Technology (ZIPIT) platform, which enables funds transfers between customers at different banks.

In 2014, the Bankers Association of Zimbabwe (BAZ) laid a complaint against EcoCash with the Competition and Tariff Commission (CTC), alleging that EcoCash had initially refused to share its USSD infrastructure with banks, and that

1 Follow-up interview with POTRAZ representative, 11 April 2023.

it had later provided access only on discriminatory terms.[2] The preliminary findings by the CTC indicated that EcoCash had abused its dominance by refusing to interoperate, thus strongly lessening competition, raising rivals' costs, and squeezing the margins of its rivals.[3] The CTC then recommended a consultation process between the Reserve Bank of Zimbabwe (RBZ), the Postal and Telecommunications Regulatory Authority of Zimbabwe (POTRAZ), and the MNOs. The result of this process was a series of regulatory measures that were rolled out over a period of several years.

This article examines the market power and behaviour of EcoCash (and its parent company Econet); key regulatory measures taken in response; and the apparent lack of immediate impact of the regulatory measures. Zimbabwe's Competition Act uses the term "substantial market control", not "dominance", in respect of anti-competitive practices (Republic of Zimbabwe, 1996). In this article, I use the term dominance.

Data collection

This study used a combination of statistical and interview data. I used publicly available statistical data in the POTRAZ quarterly and annual reports to assess market share in the MNO and mobile money sectors from 2016 to 2021. With respect to mobile money tariffs, I used the publicly available rates from 2021 to analyse pricing by the three providers. I also conducted semi-structured interviews with representatives of the three MNOs, the CTC, POTRAZ, and the RBZ, in order to get insights into the dynamics of the mobile money market, and of regulatory measures targetted at the market, in the period 2016 to 2021. All of the interviewees, six in total, were experts in the workings of Zimbabwe's mobile money sector.

2. Literature review

Mobile money markets

Mobile money has penetrated remote markets, financially empowering the unbanked and marginalised segments of society. The rise of mobile money has contributed to socioeconomic development through the provision of financial services to segments of society where branch banking was geographically limited (Jack & Suri, 2011; Pelletier et al., 2019). Customers mainly use the platform for airtime recharging and transfers, payments for goods and services, and cash withdrawals (Anderson, 2010). Mobile money services are generally provided by a digital platform that connects users from different sides of the market, including subscribers who cash in and cash out money through the

2 Interview with CTC representative, 24 February 2021.
3 Interview with CTC representative, 28 September 2021.

platform, agents who facilitate transactions, merchants who receive mobile cash payments, and an MNO service provider that provides the network and enables customers to process transactions using their phones. Thus, mobile money service markets are multi-sided in nature.

The nature of competition in the mobile money services industry is tiered, with competition between MNOs in the provision of mobile money services, and competition between MNOs and financial institutions in the provision of value-added services. In many countries, the dominant mobile network operators have likewise established dominant positions in the provision of mobile money services, partly due to inherent network effects, giving rise to numerous competition and regulatory concerns (Robb & Vilakazi, 2015). Dominant firms tend to want to maintain their dominance, foreclosing rivals through various forms of anticompetitive behaviours, including, but not limited to, exclusion.

Network effects and market power in multi-sided markets

Multi-sided markets connect two or more distinct, interdependent groups of market participants via a platform (OECD, 2018). This interdependency is impacted by externality effects that arise in these markets, since users value the platform based on the number of users on it. Users' preference for networks with many users is a function of network effects, which are defined as the benefit that a user derives from another user's consumption, i.e., users derive greater utility when more users consume the service (Macmillan et al., 2016). MNOs with large market share (and thus strong network effects) are attractive to consumers and service providers. Hence they will often continue to grow market share, sometimes tipping the markets to become a dominant service provider (Zingales & Lancieri, 2019). Multi-sided markets naturally tip towards the control of a few dominant firms, and even monopoly, due to the strong network effects present in such markets. These network effects generate rapid growth, thus increasing levels of concentration, creating barriers to entry, and posting challenges for competition enforcement (Weyl & White, 2014).

An MNO with a dominant market share of voice and data subscribers is likely to also dominate mobile money service provision. For example, Safaricom in Kenya has maintained its dominance in the mobile money sector due to the strong network effects arising from its dominance in the voice and data markets (Anderson, 2010; Robb & Paelo, 2020). A dominant MNO has an incentive to resist interoperability, so as to maintain its dominance by inducing out-of-network subscribers to join its network and inducing existing subscribers to remain (Robb et al., 2017). Network effects may also facilitate exclusion through the tying and bundling of services by firms, thus reinforcing network effects in the market (Robb & Vilakazi, 2015). The highly concentrated nature of the telecommunications sector in most countries contributes to high barriers to entry in those markets, but it is important to note that it is in their nature to be so due to the high set up and operational costs. High

barriers to entry and concentrated markets enable market power on the part of incumbent firms that do not face effective competitive restraint, and this may reflect in uncompetitive prices (Macmillan et al., 2016).

Regulation of competition in multi-sided platform markets

Traditional competition regulation frameworks were designed for traditional markets where suppliers and consumers meet in one market and the monitoring of activity is all done in the one market (Anderson, 2010). Regulatory frameworks designed for such markets are not effective for multi-sided digital platform markets, and hence the emergence of a rethink, in many markets, of competition regulation for digital platforms.

Mobile money services have instigated disruptive competition in the traditional banking and telecommunications sectors, alongside complex competition regulation concerns for digital platform markets. Digital platforms have become a major contributor to economic growth in many countries, as well as a competition regulation concern, with countries seeking to amend their competition regulatory frameworks to enable them to deal with antitrust conduct in such markets (Andreoni & Roberts, 2020). Because it is often the case that digital platforms grow rapidly in size and in the complexity of their operations, developing effective regulatory tools can be a challenge for regulators (Zingales & Lancieri, 2019). The historical methodologies of defining markets do not capture the dynamic features of digital markets, since market demand is multi-sided and there is a need to consider the consumers' welfare in multiple groups (Evans & Schmalensee, 2013).

Clear regulation and interoperability of telecommunications infrastructure play a fundamental role in the success of mobile money services (Macmillan et al., 2016). Regulators can use tools such as infrastructure-sharing agreements to open up markets and encourage innovation, entry, and participation by smaller firms who could not afford such costly setups. Interoperability can exist at different levels in a mobile money market. Platform interoperability exists where customers can send and receive money between accounts across networks. Where agents can serve customers from different networks, agent interoperability exists. If customers can access their mobile money account from any SIM card, customer interoperability is said to exist (Robb & Vilakazi, 2015). Very few of the above levels of interoperability exist in developing-country markets, and where they do exist, regulators have intervened to enforce interoperability and ensure that the services are available on fair terms (Robb & Vilakazi, 2015). Most mobile money markets exhibit constraints, where customers must cash out their funds from a registered agent who usually serves one MNO, known as agent exclusivity. This has become a common competition concern

in mobile money markets because it limits customer choice and ties customers to one network, which may in most cases be dominant but is not necessarily preferred by customers (Robb & Vilakazi, 2015).

Enabling interoperability does not immediately result in healthy market competition, as the dominant firm's position may be otherwise entrenched, and firms may not have the incentive to compete vigorously (Katz & Shapiro, 1985). Concerns therefore remain, including abuse of dominance, collusion, and tying and bundling. Because telecommunications markets are prone to tipping, many markets have witnessed strong winners and losers, where the winner takes it all (Rysman, 2009). In such cases, smaller rivals remain small, serving a small share of the market, usually with lesser-quality services and network, and no meaningful influence on competitive outcomes in the market (Rysman, 2009). However, Tanzania is an example where interoperability has helped foster competition among mobile money service providers, and consumers have seen the benefits through lower prices and more convenient cross-network services (Robb & Vilakazi, 2015).

3. Findings

Market positions of Econet and EcoCash

It was found from the available market data that Econet consistently dominated the Zimbabwean mobile telecommunications market between 2016 and 2021, growing its market share to a high of 69.1% of active subscribers in 2019, followed by small declines in 2020 (to 68%) and 2021 (to 65.9%) (Table 1).

Table 1: MNOs' market shares of active subscribers, 2016–2021

Operator	Year					
	2016	**2017**	**2018**	**2019**	**2020**	**2021**
Econet	50.6%	51.1%	65.8%	69.1%	68%	65.9%
NetOne	35.4%	35.9%	24%	22.9%	26.2%	29.8%
Telecel	14%	12.9%	10.2%	8.1%	5.7%	4.3%

***Note*.** Data sourced from POTRAZ reports.

NetOne was consistently in second place, with a market share ranging between 22.9% and 35.9%. Telecel's market share was consistently much smaller.

EcoCash entered the mobile money services sector in September 2011, after OneMoney and Telecash had entered in January 2011, and quickly achieved dominance. Like its parent MNO Econet, EcoCash remained dominant during the period 2016 to 2020 (Table 2).

Table 2: Mobile money services' shares of active subscribers, 2016–2020

Operator	Year				
	2016	**2017**	**2018**	**2019**	**2020**
EcoCash	98.1%	97.4%	96%	93.8%	88%
OneMoney	0.7%	0.8%	2.8%	5.5%	11.6%
Telecash	1.2%	1.7%	1.1%	0.8%	0.4%

Note. Data sourced from POTRAZ reports.

In 2016, EcoCash had 98.1% market share of active mobile money subscribers, OneMoney had 0.7%, and TeleCash had 1.2% (Table 2). By 2020, EcoCash's share of active mobile money subscriptions had dropped to 88%, OneMoney's share had grown to 11.6%, and Telecash had a mere 0.4% of the market (POTRAZ, 2020). Despite its declining share of the market, EcoCash was consistently the dominant player.

Pricing behaviour of EcoCash

As seen in Table 3 below, EcoCash prices increased by more than 300% from 2017 to 2020, during a period when, as seen above in Table 2, its market share decreased by only 5%. (In this section, unless stated otherwise, the Zimbabwe Dollar (ZWL) is the currency used.) This pricing behaviour is indicative of substantial market power and a lack of effective competitive restraint from rivals.

Table 3: EcoCash tariffs for registered subscribers, 2017–2021, in ZWL

Transaction amount (ZWL)	Tariff (ZWL)			
	2017	**2019**	**2020**	**2021**
10	0.37	0.81	1.42	1.42
20	0.53	0.95	2.10	2.10
30	0.69	1.22	2.50	2.63
50	1.22	2.39	4.62	5.31
100	2.12	4.41	6.96	8.01
300	2.58	5.29	14.59	17.87
400	2.62	5.31		
500			27.54	34.43
1000				52.31
3000				57.30

Note. Data sourced from Econet website, Madamombe (2017), Mudzingwa (2019), Muhamba (2020).

As seen in Table 4 below, a comparison of EcoCash mobile money tariffs with those of the other mobile money providers indicated that EcoCash transfer rates were higher than those of the other MNOs at all transaction levels. However, the gap between the EcoCash rates and those of the other MNOs became smaller at higher transaction levels. The mobile money transfer rates were calculated as a percentage of the transaction amount for EcoCash, OneMoney, and Telecash.

Table 4: 2021 EcoCash, OneMoney and Telecash tariffs (as % of transaction amount)

Transaction amount (in ZWL)	Tariff (as % of transaction amount)		
	EcoCash	**OneMoney**	**Telecash**
10	14.2%	7.5%	5.9%
20	10.5%	6.75%	4.75%
30	8.77%	5.83%	4.07%
50	10.62%	6.58%	4.6%
100	8.01%	6.39%	4.2%
300	5.96%	3.22%	4.62%
500	6.89%	2%	4.04%
1000	5.23%	1%	1.5%
3000	1.91%	1.7%	1.5%

Note. Data sourced from operators' websites and author's calculations.

Regulatory measures

MNOs in Zimbabwe are regulated by POTRAZ, and financial services providers are regulated by the RBZ. The growth of mobile money and associated competition concerns motivated the CTC to recommend that the RBZ be involved in the process of responding to the EcoCash case, since mobile money service provision falls under both the telecommunications and financial services sectors.[4] The collaboration between POTRAZ, the RBZ, and the CTC contributed to the development and issuance of several regulatory measures.

USSD rates

In December 2015, POTRAZ issued the Regulatory Determination on Costing of USSD Based Mobile Banking Services, which required network operators to assign USSD to banks on a non-discriminatory basis, so as to promote competition in the mobile money sector (POTRAZ, 2015b). In 2016, POTRAZ introduced the long-run incremental cost (LRIC) model to determine USSD pricing, with the aim of

4 Interview with RBZ representative, 9 September 2021.

effectively reducing USSD tariff rates, with which all mobile money service providers complied.[5] Using this model, in 2016 POTRAZ initially pegged the price ceiling for USSD for mobile banking transactions at USD0.05. This was then reduced to below USD0.02 as of September 2021, equivalent to ZWL1.61 (POTRAZ, 2021b). All three mobile money operators complied with these regulations.

Interoperability

In November 2015, POTRAZ issued the Regulatory Circular on Interoperability of Telecommunication Operators' Mobile Money Platforms, mandating all three MNOs to facilitate interoperability and cross-network transactions between their mobile money platforms (POTRAZ, 2015a). These interoperability regulations were intended to ensure that customers could transact between different MNO wallets (wallet-to-wallet) and also between their bank accounts and MNO wallets (bank-to-wallet).[6] OneMoney and Telecash complied, but EcoCash waited four years, until 2019, before it activated the wallet-to-wallet service with fellow MNOs, which meant that non-EcoCash-subscriber recipients of cash from EcoCash subscribers still had to receive cash from an agent (i.e., a OneMoney or Telecash agent) (Robb & Paelo, 2020). (In 2016, the Minister of Information Communication Technology, Postal and Courier Services published the Postal and Telecommunications (Infrastructure Sharing) Regulations, which provided POTRAZ with a mandate to ensure that the parent MNOs—Econet, NetOne, and Telecel—developed infrastructure-sharing agreements (Republic of Zimbabwe, 2016).)

In 2017, the RBZ issued Guidelines for Retail Payment Systems and Instruments, which required that all players in the payments industry implement interoperability in their systems (RBZ, 2017). These guidelines required all mobile money providers to implement interoperability amongst themselves and with banks through the ZIPIT platform, enabling wallet-to-wallet transactions across mobile money service providers. In 2020, the Minister of Finance and Economic Development published the Banking (Money Transmission, Mobile Banking and Mobile Money Interoperability) Regulations. These regulations, to be overseen by the RBZ, compelled MNOs to ensure that, in addition to being licensed by POTRAZ, their services were recognised in terms of the National Payment Systems Act (Republic of Zimbabwe, 2001; 2020).

Thus, there was now substantial scope for the two regulatory authorities to coordinate their efforts on the regulation of the mobile money market, with the RBZ taking responsibility for the financial services dimensions and POTRAZ remaining responsible for the telecommunications dimensions. The desired outcome

5 Follow-up interview with POTRAZ representative, 7 December 2021.
6 Interview with CTC representative, 28 September 2021.

was robust mobile-money competition among the MNOs, and between MNOs and banks. Customers would now be able to transact between wallets—mobile or bank—at tariff rates regulated by the RBZ,[7] and EcoCash would, it was hoped, eventually be compelled to comply with these regulations, since non-compliance would result in the withdrawal of its operating licence.[8]

At the time of finalising my core data collection in May 2022, EcoCash was, along with OneMoney and TeleCash, now complying with the regulatory requirements set out by POTRAZ and the RBZ. However, EcoCash was still charging significantly higher transaction fees than those charged by OneMoney and Telecash. Thus, it still remained to be seen whether the joint efforts by the two regulators would ultimately result in less market dominance by, and more competitively priced offerings from, EcoCash.

5. Analysis

As seen above, EcoCash did not initially implement the required wallet-to-wallet transfer capabilities required by POTRAZ regulations. EcoCash's refusal to interoperate between MNO wallets placed it at a strategic advantage because, due to its dominance, many customers with other MNO SIM cards would feel compelled to also subscribe to Econet in order to receive EcoCash funds directly into their mobile wallets, irrespective of the fact that EcoCash's transfer tariffs were, for many transfer amounts, significantly higher than the tariffs of the other two mobile money services.

Also, we saw above that EcoCash acted in an exploitative manner by raising its prices, in spite of already being more expensive than the other two mobile money services, between 2017 and 2021. Its prices increased by 300% during this period, accompanied by only a 5% decrease in its market share. The ability of EcoCash to raise prices but still retain its market share was a clear sign of market dominance—and, potentially, abuse of dominance. EcoCash continued to charge anti-competitive prices despite attempted regulatory remedies, with the result that there was no true competitive pressure on EcoCash from its mobile money rivals OneMoney and Telecash.

EcoCash's establishment of dominance was to a great extent enabled by POTRAZ and the RBZ, which both failed to enforce their regulations. EcoCash took four years to comply with the 2015 POTRAZ MNO interoperability rules, without consequences.[9] The RBZ, for its part, failed to enforce its 2017 financial services-related interoperability regulations that requiured EcoCash to fully interoperate with

7 Interview with POTRAZ representative, 9 September 2021.
8 Interview with RBZ representative, 9 September 2021.
9 Interview with POTRAZ representative, 9 September 2021.

the other two mobile money service providers. Both regulators had the power, via regulations, to force EcoCash to fully interoperate much sooner than 2019—the year when the operator finally began compliance with the POTRAZ and RBZ rules.

6. Conclusion

The objective of this study was to assess the regulatory challenges that mobile money has presented in Zimbabwe—with a particular focus on the anti-competitive complaint raised by banks against EcoCash in 2014—and to examine the effectiveness of the regulatory responses to EcoCash's market dominance. My assessment found that, during the period studied, EcoCash had market dominance, and showed signs of abusing this dominance. EcoCash's market dominance demonstrated, among other things, that the steps taken by the mobile money sector's regulatory bodies, POTRAZ and the RBZ, had not yet succeeded in compelling EcoCash to price its services more competitively in relation to the prices of the two much smaller players in the market, OneMoney and Telecash.

A key shortcoming in the performance of POTRAZ and the RBZ was their lack of aggressive enforcement of the regulations that they had in place to compel EcoCash to fully interoperate its services with those of OneMoney and Telecash. Regulation without aggressive enforcement undermines the intent and legitimacy of the regulations. In mobile money services markets, it is crucial that competition regulation succeeds in generating a level playing field for market participants. Such markets are fundamental to the lives and livelihoods of the vast majority of consumers all around the world, and particularly in developing-world settings such as Zimbabwe where many people remain unbanked and thus rely heavily on mobile money platforms.

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