Information asymmetry and market power in the African banking industry

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\textbf{A B S T R A C T}

This study investigates the role of information sharing offices and its association with market power in the African banking industry based on a panel of 162 banks from 42 countries for the period 2001–2011. Five simultaneity-robust estimation techniques namely: Two Stage Least Squares; Instrumental Fixed effects to control for the unobserved heterogeneity; Instrumental Tobit regressions to control for the limited range in the dependent variable; Generalised Method of Moments (GMM) to control for persistence in market power and Instrumental Quantile Regressions (QR) to account for initial levels of market power are employed.

The following findings have been established from non-interactive regressions. First, the effects of information sharing offices are significant in Two Stage Least Squares, with a positive effect from private credit bureaus. Second, the GMM results suggest that, public credit registries increase market power. Third, from Quantile Regressions, private credit bureaus consistently increase market power throughout the conditional distributions of market power. Given that the above findings are contrary to theoretical postulations, we extended the analytical framework with interactive regressions in order to assess whether the anticipated effects can be established if information sharing offices are increased. Our extended findings show: (i) a negative net effect from public credit registries on market power in GMM regressions and; (ii) negative net impacts from public credit registries on market power in the 0.25th and 0.50th quartiles of market power.

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1. Introduction

The issue of bank efficiency and market power has been at the centre of economic research and analysis over the past three decades (see Townsend, 1979; Stiglitz and Weiss, 1981; Aghion and Bolton, 1992; Maudos and Fernandez de Guevara, 2007). The interest stems from the fact that market power may lead to inefficiency in the banking system, resulting in a net loss
of social and economic welfare in the country (Maudos and Fernandez de Guevara, 2007). Prior research evidence indicates that market power translates into higher costs of financial intermediation, lower volumes of savings and investment and consequently lower economic growth (Stiglitz and Weiss, 1981; Djankov et al., 2007). More specifically, both theoretical arguments and empirical evidence highlight that banks with market power tend to hinder firm growth because such banks can extract rents from existing lending relationship (Petersen and Rajan, 1995; Marquez, 2002; Canales and Nanda, 2012).

Aware of the negative effects of market power on economic growth, governments and policy makers in both developed and developing countries have embarked on policies aimed at enhancing competition and credit expansion (Buyukkarabacak and Valev, 2012). Prominent among the reform policies in the developing country context include: (i) the liberalisation of the banking sector under the auspices of the International Monetary Fund/World Bank; and (ii) the introduction of credit information systems (Luoto et al., 2007; Triki and Gajigo, 2014; Asongu et al., 2016; Tchamyou and Asongu, 2017). However, while the past decade has witnessed growth of information sharing offices in many sub-Saharan African countries, no study has systematically examined the effects of information sharing on market power (Aris, 2010). The above is against the background that banking sector in sub-Saharan Africa is dominated by big players, such as Barclays bank, Standard Chartered bank, Société Générale and BNP Paribas, which confers market power on these banks. More importantly, market power may be particularly problematic in sub-Saharan Africa because of lack of transparency in corporate reporting, weak company law, under-development of institutions and severe information asymmetries between lenders and borrowers (see Boateng and Abdulrahman, 2012). Theory therefore suggests that, in countries where weak company laws and creditor rights are present, the establishment of information sharing offices would not only reduce the market power of banks and increase competition but would also improve credit allocation.\(^1\)

Conversely, it may be argued that, if market power is reduced due to increased competition resulting from information sharing, banks incentives to generate and share information may diminish (Marquez, 2002), thereby leading to resource mis-allocation because banks may generate insufficient information to make better judgement on credit decisions (Dell’Arriaca and Marquez, 2004). Petersen and Rajan (1995) echo similar views and point out that, increased competition between banks due to information sharing may reduce credit availability, especially for new businesses. Petersen and Rajan (1995) reinforce their argument by pointing out that banks with market power are in a better position to carry out inter-temporal cross-subsidisation in lending relationships, and hence they are more likely to lend to risky young firms. The above arguments suggest that the impact of increased competition due to information sharing on market power and credit market in general is ambiguous. To Zarutskie (2006), an increase in competition because of information sharing may cut either way. The ambiguity surrounding the relationship between information sharing and market power, despite the massive financial liberalisation in Africa calls for investigation in order to increase our understanding of the role of information sharing offices and how they impact on market power.

In this paper, we attempt to shed light on the effect of information sharing offices on the market power in an environment where company laws, creditor rights and institutions appear weak. More specifically, we analyse the effects of credit information offices on market power based on 162 banks from 42 sub-Saharan African countries over the period of 2001–2011. This study builds on this literature by investigating the relationship between information sharing offices and market power in African countries. The study contributes to the growing empirical literature on the role of information sharing in financial market development in an environment where credit rights, company laws and institutions are weak. The findings that information sharing offices exert insignificant effect on market power imply that information sharing offices are not having the desired effect of the reducing market power in the African banking industry. Therefore policy makers and governments should take steps to upgrade the necessary infrastructure to facilitate the collection of accurate data and enhance efficient management and coordination of these offices to improve credit allocation which are important for entrepreneurial activities and economic growth.

The rest of the study is organised as follows. The next section reviews briefly the effects of information sharing on credit market. Section 3 covers the data and methodology while the empirical results and discussion are provided in Section 4. Section 5 concludes with implications and future research directions.

### 2. Relevant literature

#### 2.1. Effects of information sharing on credit markets

Over the past three decades, a number of researchers have widely documented that most credit market failures are attributed to information asymmetries between lenders and borrowers (Besanko and Thakor, 1987; Stiglitz and Weiss, 1981; Marnez, 2002; Triki and Gajigo, 2014; Asongu et al., 2016).

\(^1\) It is important to balance the above narrative with an alternative perspective because the introduction of credit registries (while could level the playing field among financial institutions) at the same time could substantially curtail banks' efforts to collect credit information. This is essentially because the initial purpose of the costly information gathering by banks is to earn information rents from information asymmetry. In the same vein, banks may still fight to keep their competitive advantage by acquiring more information of different nature that is not shared with information sharing offices. This narrative on a change in the need to collect information on the one hand and on the other hand, the type of information collected (owing to strategic interest) is consistent with Karapetyan and Stacescu (2014a,b). Furthermore, another dark side of information sharing is that borrowers may have distorted incentives, such that, information sharing offices have to play a disciplining role by counseling borrowers on the disadvantages of defaulting on their debts because they want to seek refuge in the informal financial sector (Padilla and Pagano, 2000; Veracammen, 1995; Asongu et al., 2016).
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