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Mobile phones, institutional quality and entrepreneurship in Sub-Saharan Africa

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ABSTRACT

This study investigates whether mobile phone penetration modulates the effect of different indicators of governance on some indicators of the ease of doing business in Sub-Saharan Africa with data from the period 2000–2012 by employing the Generalised Method of Moments. Three broad concepts of governance are explored: (i) political (comprising voice & accountability and political stability/no violence), (ii) economic (involving government effectiveness and regulation quality) and (iii) institutional (including corruption-control and rule of law). Ten dimensions of entrepreneurship are considered. Two main findings are established with respect to the net effects of the interaction between mobile phones and governance dynamics. They are (1) reduced cost of business start-up procedure, the time to build a warehouse and the time to resolve an insolvency and (2) increased time to enforce a contract, to register a property and to prepare and pay taxes. Implications for theory and policy are discussed. Some of the engaged policy implications include the following. (i) Measures on how to leverage on the potential of mobile phone penetration for entrepreneurship opportunities by addressing challenge of access to and affordability of mobile phones on the one hand and on the other hand, improving on the role of the mobile phone as a participative interface between emerging entrepreneurs and governance. (ii) The relevance of the mobile phone in mitigating information asymmetry between entrepreneurs and government institutions, notably by: reducing government inefficiency (which potentially represents an additional cost to doing business) and decreasing informational rents, bureaucracy and transaction costs.

1. Introduction

This study investigates whether mobile phone penetration[1] modulates the effect of different indicators of governance on some indicators of the ease of doing business in Sub-Saharan Africa (SSA).[2] At least three reasons motivate the inquiry.

First, there is a high potential for information and communication technology (ICT) penetration in Africa given that high-end markets in Asia, Europe and North America are experiencing stabilization in the growth of ICTs like mobile phones (see Asongu, 2015; Penard et al., 2012). Hence, policy reforms could be leveraged on the mobile phone penetration potential to address economic concerns like job creation in the African continent.

Second, entrepreneurship for job creation has been documented as one of the principal remedies for Africa's growing population and corresponding unemployment (Daouda et al., 2016; Tchamyou, 2016). In essence, the current generation is witnessing the most significant demographic transformation and Africa is playing a substantial role in the transition. To be sure, the continent's population has been projected to double by 2036; representing about 20% of the world total (Asongu, 2013; UN, 2009). Unemployment, especially among youth, has been documented as one of the most important challenges of this demographic transition inter alia: criminal activities and engagement in armed conflicts (AERC, 2014; Brixiova et al., 2015). The continent has been endowed with the fastest growing youth demography, which represents about 20% of its population. The percentage of population between the ages of 15 and 24 may represent sub-optimal and negative externalities if jobs are not available to accommodate this anticipated

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[1] Throughout this study, the terms “mobile’, ‘mobile telephony’, ‘mobile phones' and ‘mobile phone penetration’ are used interchangeably.

[2] Consistent with Naudé (2010) and Brixiova et al. (2015), entrepreneurship is defined in this study as the resources and processes whereby individuals can use market avenues to create new enterprises. The terms ‘entrepreneurship’ and ‘doing business’ are used interchangeably throughout the study.

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demographic shift.

Third, in the light of the above policy concerns, the literature has not substantially addressed linkages between ICT and entrepreneurship in Africa. The study closest to this relationship is Tchamyou (2016) which investigated the role of the knowledge economy in African business. It concluded that the four dimensions of the World Bank's knowledge economy index played a fundamental role in driving the starting and the continuation of business in Africa. The conclusion of Tchamyou is broadly consistent with the extant theoretical and empirical literature (which is engaged in Section 2) on the importance of knowledge spillovers in entrepreneurship (Acs and Sanders, 2012; Afutu-Kotey et al., 2017; Ghio et al., 2015; Hayter, 2013; Kuada, 2014), notably: the relevance of social media in promoting entrepreneurship (Jones et al., 2015; McCann and Barlow, 2015; Wang, 2016); the employment of social entrepreneurship to boost technology (Mulloth et al., 2016); knowledge sharing for the success of entrepreneurship (Allen et al., 2016); innovating the mobile phone for entrepreneurship (Asongu and Biekpe, 2017) and linkages between ICT, openness and entrepreneurship (Asongu and Nwachukwu, 2018).

We extend this literature by assessing whether mobile phone penetration modulates the effect of different indicators of governance on some indicators of the ease of doing business. Whereas governance is the main independent variable, mobile phone penetration is considered as a policy variable because in the modelling exercise, it modulates the effect of governance on entrepreneurship. The motivation to include governance indicators builds on a stream of recent literature on the relevance of good governance in addressing sustainable development challenges such as unemployment in Africa. Theoretically, the quality of governance has been increasingly linked with improving: (i) the quality of life and the efficient allocation of resources (Anyanwu and Erhijakpor, 2014; Fosu, 2013), (ii) the situation of the deprived elderly (Fonchingong, 2014) and (iii) the foundation for changes in society (Ajide and Raheem, 2016; Efobi, 2015; Fosu, 2015a, 2015b).

In addition to the above justification for harnessing good governance and mobile phones for entrepreneurship in Sub-Saharan Africa (SSA), there has been caution in scholarly circles not to consider the mobile phone as a silver bullet of development (Mpogole et al., 2008, p. 71). To enhance opportunities for policy implications, three main governance categories are employed, namely: (i) political governance (involving political stability/no violence and voice and accountability); (ii) economic governance (covering government effectiveness and regulation quality) and (iii) institutional governance (comprising corruption-control and the rule of law). "*Political governance is defined as the election and replacement of political leaders. Economic governance is the formulation and implementation of rules that enable the delivery of public goods and services. Institutional governance is the respect of the state and citizens for institutions that govern interactions between them*" (Asongu and Nwachukwu, 2016a, p. 2).

In the light of the above, the primary contribution of this paper is to complement the existing macroeconomic and institutional literature on how entrepreneurship can be boosted in less developed countries. The inquiry combines the issues raised by assessing how the potential for mobile phone penetration (discussed in the second paragraph) can modulate the effect of governance on entrepreneurship (discussed in the third paragraph) in order to address the identified gap in the third strand (covered in the fourth paragraph). Therefore, this investigation seeks to address the following research question: does mobile phone penetration modulate the effect of different indicators of governance on some indicators of the ease of doing business in SSA? Such positioning substantially deviates from the microeconomic literature on employing technology in entrepreneurial opportunities. This literature is discussed in the section that follows. The remainder of the paper is presented as follows. The theoretical underpinnings and related literature are discussed in Section 2. The data and methodology are covered in Section 3. Section 4 presents the empirical results and corresponding discussion while Section 5 concludes with suggestions on future research directions.

2. Theoretical underpinnings and related literature

The relevance of knowledge and ICT in economic prosperity has been the subject of much scholarly concern (Asongu et al., 2016). The literature is consistent with a two-way causality flow between economic development and knowledge. Compared to the neoclassical growth theories which acknowledged technology and know-how as public goods and services which are strictly exogenous to the economic system, both the neoSchumpeterian and endogenous interpretations of economic development are the basis for new economic development (Howells, 2005). According to these underlying new growth underpinnings, progress in technology is the result of an immediate investment by citizens via resource mobilizations which are critically related to human resources (Romer, 1990).

As recently documented by Brixiova et al. (2015), the relevance of productive entrepreneurship for economic development as well as variations in the types of entrepreneurship across nations have already been substantially studied (also see Baumol, 1968, 1990). According to the authors, both empirical and theoretical literature on factors affecting entrepreneurship in developing countries in general and Africa in particular are comparatively scarce. Some papers in this strand include: Baumol (2010); Naudé (2008, 2010); Leff (1979); Brixiová (2010, 2013) and Gelb et al. (2009).

The policy concern for youth unemployment in Africa has already been discussed in the introductory section. Entrepreneurship is a means by which this policy syndrome can be addressed. The following principal causes of youth unemployment have been documented in the literature, inter alia: changes in population settings (Korenman and Neumark, 2000); development of human resources (O'Higgins, 2001); social capital (like networks and family background) (Coleman, 1988); mismatches in geography and skills (2003) and idiosyncratic specificities and structural variations of economies (Peterson and Vroman, 1992).

Alagidede (2008) has established that entrepreneurship in Africa may often be too risky. Eifert et al. (2008) investigated the cost of doing business on the continent and concluded that existing estimates undervalue the comparative performance of African corporations. A legal view of changes in and challenges of doing business in South Africa was provided by Taplin and Snyman (2004). The intensity by which trade influences business cycle synchronization is assessed by Tapsoba (2010) who has established evidence of some causal effect. The founding and progress of entrepreneurs in East Africa has been investigated by Khavul et al. (2009) who concluded that substantial community and family ties are employed by entrepreneurs to grow their businesses. Furthermore, members of the family also serve as a reliable and flexible source of cheap labour which is relevant in mitigating costs when enterprises are at initial stages of development (Kuada, 2009). The practical and theoretical insights into the role of foreign direct investment in social responsibility in developing countries were considered by Bardy et al. (2012). Paul et al. (2010) examined the influence of labour regulation externalities on the cost of doing business to establish that the indicators of doing business from the World Bank do not provide a complete perspective on the employment of workers.

The intension to become an entrepreneur by Ethiopian undergraduate students was scrutinised by Gerba (2012) to conclude that their desire to become entrepreneurs increased with lessons and studies on the doing of business. Singh et al. (2011) investigated the drivers behind the decision to become entrepreneurs by Nigerian women and found the following motivations: the availability of (i) family capital and (ii) internal and educational environments which are characterised by economic deregulation and social recognition that is internally-oriented.

The relationship between youth entrepreneurship and financial literacy was examined by Oseifuah (2010) in South Africa to establish that financial literacy is a critical determinant of entrepreneurial skills. Mensah and Benedict (2010) studied the long-run consequences of