ELSEVIER
www.elsevier.com/locate/worlddev

World Development Vol. xx, pp. xxx–xxx, 2017
0305-750X/

http://dx.doi.org/10.1016/j.worlddev.2017.03.007

Explaining Ethiopia's Growth Acceleration—The Role of Infrastructure and Macroeconomic Policy

LARS CHRISTIAN MOLLER [a] and KONSTANTIN M. WACKER [b,*]

[a] *The World Bank Group, Washington, DC, USA*

[b] *University of Mainz, Germany*

Summary. — Ethiopia has experienced an impressive growth acceleration over the past decade. This was achieved on the back of an economic strategy emphasizing public infrastructure investment supported by heterodox macro-financial policies. This paper identifies the drivers of Ethiopia's recent growth episode and examines the extent to which they were typical or unique. It combines country-specific information with the results of a cross-country panel regression model. We find that Ethiopia's growth is explained well by factors correlating with growth in a broad range of countries in recent decades, including public infrastructure investment, restrained government consumption, and a conducive external environment. On the other hand, we argue that the policy mix that supported very high levels of public investment in Ethiopia was, to some extent, unique. Interestingly, macroeconomic imbalances due to this heterodox policy mix only moderately held back growth which helps explain why Ethiopia was able to grow so fast in spite of their presence: their negative effects were quantitatively much less important than the positive growth drivers they helped to achieve. The results suggest that "getting infrastructure right" may outweigh moderate shortcoming in the macro framework at early stages of development. We further relate this country-specific finding to the recent growth literature.

Key words — economic growth, Africa, Ethiopia, determinants of growth, economic growth policy

1. INTRODUCTION

Ethiopia's growth performance over the past decade has been one of the most successful among low-income countries: the country achieved rapid and inclusive economic growth averaging 10.9% in 2004–14 (Figure 1A) according to official data [1]. This was accompanied by substantial progress across a broad range of social and human development indicators (World Bank, 2016): during 2000–11, poverty declined from 44% to 30%, income inequality remained unchanged at one of the lowest levels observed worldwide, and life expectancy increased from 52 to 63 years. By taking into consideration population growth of 2.4% per year, real GDP per capita increased by 8.3% per year during 2004–14. [2] This substantially exceeds per capita growth rates achieved in the first decade after the country's transition to a market-based economy (1992–2003: 1.3%), under the communist Derg regime (1974–91: −1.0%), and during monarchy (1951–73: 1.5%). It also exceeds regional and low-income country averages over the past decade (Figure 1B) and the 2% annual per capita growth average which Summers and Pritchett (2014) calculate for all countries since 1950 (by more than three times the global standard deviation). More generally, this episode falls into the category of "growth accelerations" discussed in the literature by Hausmann, Pritchett, and Rodrik (2004), Virmani (2012), and Rodrik (2013).

Ethiopia's economic strategy during this recent period strongly emphasized public infrastructure investment and was supported by heterodox macro-financial policies. The public investment rate rose from about 5% of GDP in the early 1990s to 18.6% of GDP in 2011, making it the third highest in the world (WDI, World Bank). Massive infrastructure investments took place in the energy, transport, communications, agriculture, and social sectors, albeit from very low levels. While agriculture was the main growth contributor at the beginning of the take-off, the services sector gradually took over in terms of importance and was later complemented by a construction boom (Figure 1C). A popular misconception, that growth was driven by manufacturing, is not borne out by the data since this sector accounted for less than 5% of value added over this period. Private consumption was important on the demand side, though investment (especially public) has become increasingly important in recent years (Figure 1D). The financing of public investment projects drew upon a range heterodox arranements [3] which also led to a crowding out of many private investment projects owing to lack of financing and this helps explain why the private investment rate in Ethiopia is the sixth lowest worldwide (WDI, World Bank). An overvalued real exchange rate (lowering the import costs of public capital goods while hurting export competeviness) and elevated inflation (yielding substantial seignorage revenues while harming macro stability) were other aspects of this policy mix.

Ethiopia's growth experience stands out from a group of other high-performing and non-resource-dependent regional peers, including Burkina Faso, Mozambique, Rwanda, Tanzania, and Uganda (labeled 'SSA5'). According to the International Monetary Fund (2013a), growth in these countries (including Ethiopia), was largely driven by improvements in macroeconomic policy combined with structural reforms and reliable external financing, which fostered productive investment and stimulated growth. A closer inspection of the Ethiopian experience reveals that the country fits this narrative only partially. What sets Ethiopia markedly apart is its emphasis on a state-led model of development (which most peers moved away from), somewhat inferior macroeconomic outcomes and the absence of recent structural economic policy reforms. [4] This raises the question of how unique Ethiopia's

*Final revision accepted: March 5, 2017.

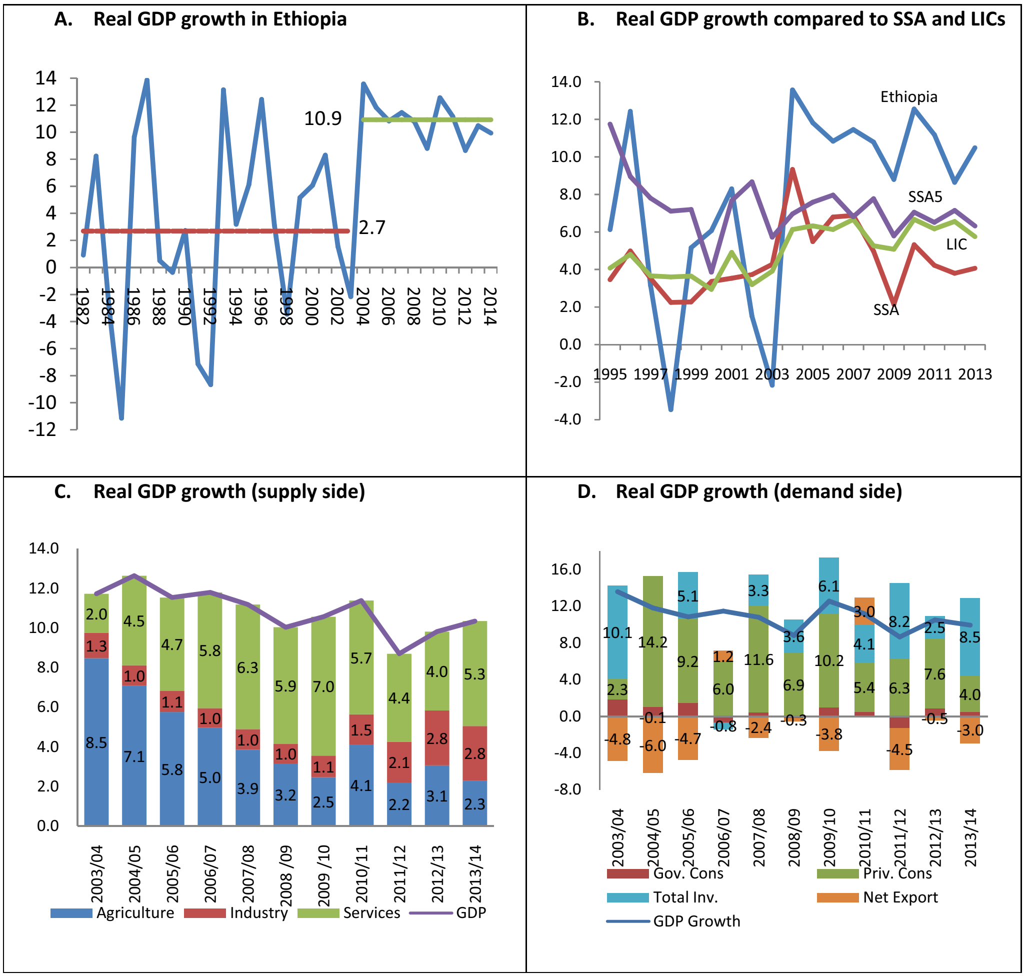

Figure 1. *Ethiopia: growth trends and contributing factors. Source: A and B: World Bank (WDI). C and D Author's estimates based on official national accounts data. SSA5: Burkina Faso, Mozambique. Rwanda, Tanzania, Uganda. SSA: Sub-saharan Africa. LIC: Low-income countries.*

recent growth performance has been and what factors can explain it.

This paper addresses the absence of academic work explaining Ethiopia's remarkable growth acceleration. Previous studies have already documented individual factors contributing to growth in Ethiopia, such as urbanization (Dorosh & Thurlow, 2014), road infrastructure (Shiferaw, Söderbom, Siba, & Alemu, 2015), returns on fixed capital (Siba, 2015), or agricultural productivity (Abro, Alemu, & Hanjra, 2014). However, no study to date assessed the relative importance of various potential drivers of the recent growth acceleration from a broad macro perspective and put it into a cross-country context. Such an analysis is relevant for the design of growth policies in low-income countries, including Ethiopia itself.[5] From an academic perspective it is also relevant to ask how special Ethiopia's growth acceleration over the last decade was, as several studies have addressed the question whether determinants of growth are different in African economies (e.g. Barro, 1991; Block, 2001; Crespo Cuaresma, 2010; Masanjala & Papageorgiou, 2008; Robinson, Acemoglu, & Johnson, 2003; Rodrik, 1998; Sachs & Warner, 1997; Temple, 1998). Our analysis is thus also of relevance to the debate about the drivers of economic growth in low-income countries and the implications for policy. In identifying growth drivers, we combine country-specific information with the results of a cross-country panel regression model that identifies structural, stabilization, and external growth determinants.

Our main findings are summarized as follows: Ethiopia's growth performance can be almost fully explained by the typical factors that also help explain economic growth in a broad range of countries over the past decades. Indeed, our results offer plausible quantitative explanations for key economic trends and policy developments in Ethiopia. Specifically, we find evidence that public infrastructure investment, facilitated in part by restrained government consumption, was the key structural driver of growth. Growth was also supported by a conducive external environment in the form of favorable global commodity prices. While growth drivers were typical, the way in which heterodox macro-financial policies (financial repression, an overvalued real exchange rate, and monetary-policy-induced inflation) accommodated growth, particularly via public infrastructure investment, was unique. Our empirical results indicate that the negative growth effects of heterodox macro policies were quantitatively much less important than the positive growth drivers they helped to achieve. This sheds light on the question of how Ethiopia could achieve high economic growth in the presence of seemingly growth-inhibiting macro-financial policies. This result is broadly in line with recent theoretical and empirical arguments that economic and institutional reforms

Please cite this article in press as: Moller, L. C., & Wacker, K. M. Explaining Ethiopia's Growth Acceleration—The Role of Infrastructure and Macroeconomic Policy, *World Development* (2017), http://dx.doi.org/10.1016/j.worlddev.2017.03.007