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South-South Integration and the SDGs:
Enhancing Structural Transformation in Key Partner Countries of the Belt and Road Initiative

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Ethiopia's Macroeconomic and Finance Policy Framework for Structural Transformation

Abstract

Ethiopia's economy grew at a double-digit rate over the 2003 to 2017 period. However, several challenges have emerged over the last four years that put in to question the possibility of sustaining the growth rate and transitioning the country into a middle-income country and beyond. These include stagnant export, significant delay and cost overruns of public projects, high debt relative to GDP and export capacity, high youth unemployment, and inflation.

This paper explores China's macro-financial policies that enabled its remarkable structural transformation to tease out lessons for Ethiopia. From the literature review and comparison of the two countries' policies, we identify the following critical steps Ethiopia needs to follow to ensure its structural transformation: (i) a monetary policy paradigm that gives attention to price stability; (ii) keeping the competitiveness of the real exchange rate; (iii) export orientation, especially in the manufacturing sector; (iv) enabling conditions for domestic savings;(v) enhanced efficiency of state owned banks in monitoring and assessment of credit risk(vi) and creating a suitable environment for manufacturing sector focused FDI.

Key words: Ethiopia, China, Structural transformation, FDI, Real exchange rate, Manufacturing

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1. Introduction

Ethiopia's reform introduced in the early 1990s resembles that of China in 1978 in many aspects. Both countries transitioned from central planning to a market-oriented economy that still leaves significant room for state intervention. However, the reform in Ethiopia suffered the hangover of the civil war of the 1980s, the need to rebuild the state in a new format, and a war that broke out at the end of the '90s. As a result, and unlike China, the post-reform growth in Ethiopia was lackluster.

In the early 2000s, the government introduced programs of massive state investment in infrastructure, schools, and health facilities. The policy resulted in a sustained and fast growth of the economy, significant poverty reduction, improved health outcomes, and educational attendance1.

The growth, however, was mainly driven by the expansion of the in-ward looking construction sector rather than the outward-looking manufacturing sector. As a result, export was underwhelming. The stagnant export coupled with the ever-increasing need to finance the expansion of public investment through foreign savings growth had an in-built balance of payment distress. Price instability was also a feature of the macroeconomic performance during this period.

As Feng et al. (2020) argued, China's macroeconomic policy has played a significant role in ensuring a successful structural transformation of the country. In this paper, we conduct a comparative analysis of macroeconomic policymaking in the two countries and identify lessons that can be learned from China’s macroeconomic policies and the ensuing structural transformation.

The rest of the paper is structured as follows. Section 2 provides a detailed analysis of Ethiopia's progress in structural transformation to learn from the past and identify future challenges. Section 3 compares experiences between Ethiopia and China, focusing on periods of similar development levels in the two countries. Finally, section 4 teases out lessons to be learned from China's macroeconomic policy.

1 The increase in school enrollments, unfortunately, come at the expense of quality improvements.

2. Progress in Structural Transformation and Challenges Faced

2.1 Economic Growth

In discussing the economic growth in Ethiopia, it is helpful to distinguish three periods that are characterized by different policy orientations and types and magnitudes of shocks: 1974-1991, 1991-2002, and 2003-2018.

2.1.1 1974-1991

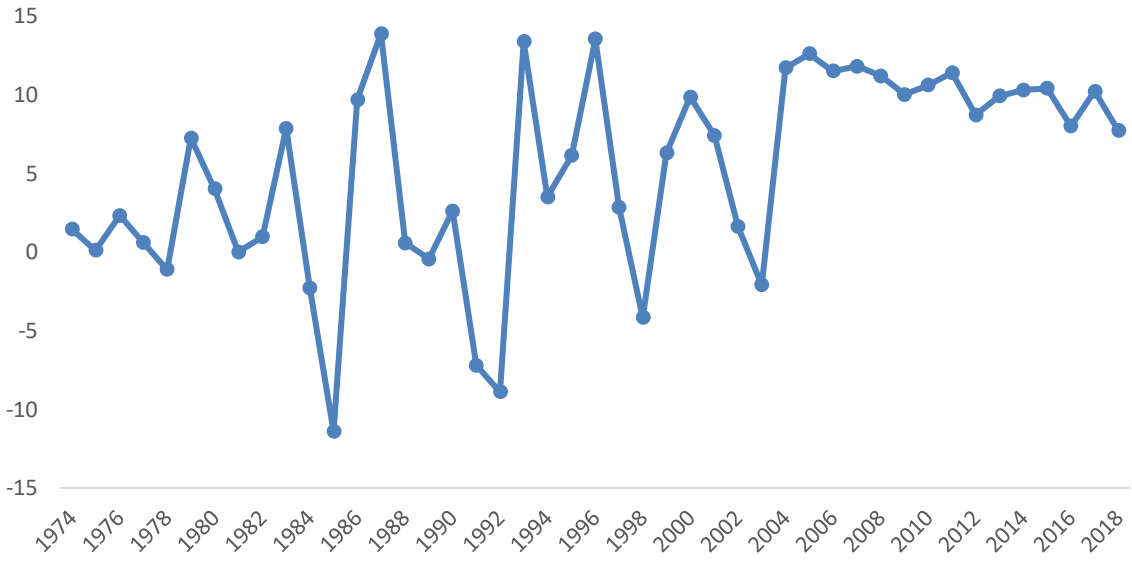
In terms of policy orientation, the period 1974-1991 was characterized by a command economy with no or very little space for the private sector. In addition, there was an ongoing civil war and recurrent droughts that affected the economy. For instance, droughts of different magnitudes occurred in 1975/76, 1978/79, 1982, and 1983/84. Because agriculture was by far the largest sector in this period, each weather shock led to a significant decline in economic growth. As figure 1 shows, the economy was very volatile during this period.

2.2.2 1991-2002

The country introduced an economic reform in the early 1990s towards a market-oriented economy, albeit with a strong role played by the state. The policy followed during this period was known as “agricultural development led industrialization”, or ADLI. This development strategy is inspired by the dual-economy model of linkages between sectors. The policy aims to achieve successful industrialization through the growth of the agricultural sector and its linkages with other sectors of the economy. In concrete terms, the strategy entails significant investment in the agriculture sector. The improved performance of the agriculture sector was supposed to release surplus labor, provide savings that can be invested on the manufacturing sector, and provide inputs and demand for the industrial sector. Other policies implemented in this period are the privatization of public enterprises, and a significant reduction in tariff rates, with the average tariff rate declining from 79% in 1993 to 20% by 1998 (Bigsten, Gebreeyesus and Söderbom (2016).

Partly due to the Ethio-Eritrean war of 1998-2000, and partly because the economy was still recovering from the hangover of the civil war, and due to weather shocks, the economic performance during this period is also characterized by significant volatility. Among the weather-related economic shocks in this period were the 1991/92 and 2002/03 droughts. Average growth in this period is 4.6%, with a standard deviation of 6.5.

Figure 1: Ethiopia: economic growth, 1974-2019, percentages



Source: IMF IFS statistics (https://data.imf.org/?sk=4c514d48-b6ba-49ed-8ab9-52b0c1a0179b&sId=1390030341854)

2.2 Economic Growth in 2003-2018

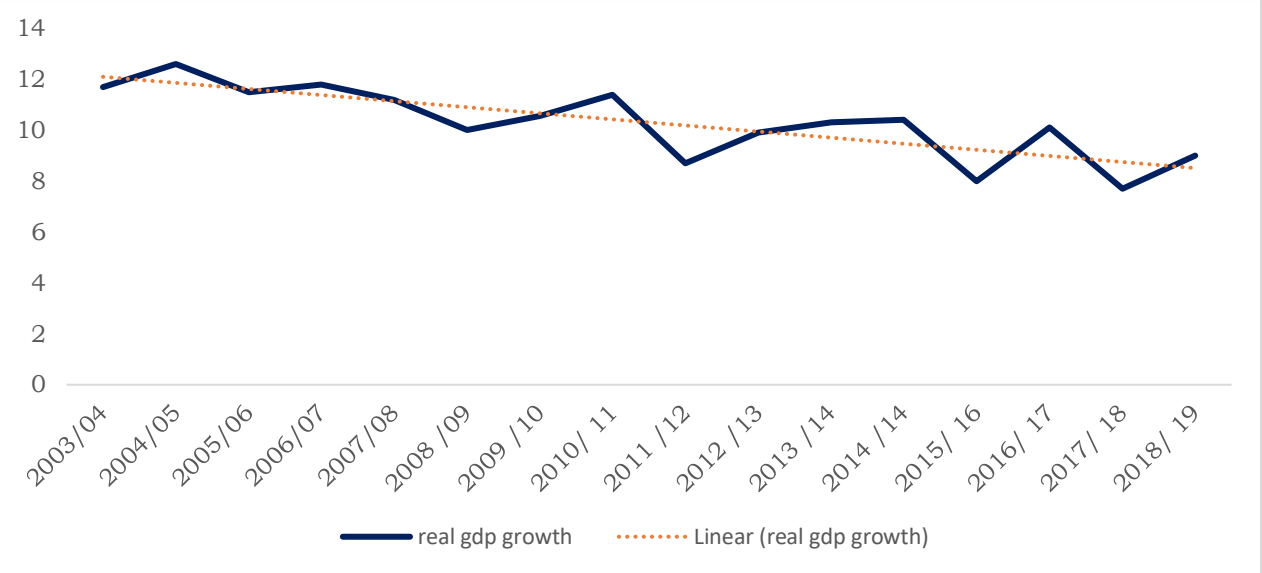
Economic growth in the previous period (1992-2002) was not robust enough to keep up with population growth, relieve a large portion of the country of poverty, and achieve structural transformation. As a result, especially starting from the PASDEP period (2005/06-2009/10), the policy focus shifted from ADLI to include industry and urban sectors. 2 In this period, the government made significant public investment in infrastructure, and FDI was encouraged through a series of incentives such as tax exemptions, tax holidays, and the construction of industrial parks. The government accelerated its investment on infrastructure during the GTP I period (2010-2015) and early periods of the GTP II period (2015-2020). As a result of the build of debt and ensuing macroeconomic instability, the policy of the government is changed since 2019 towards ensuring macroeconomic stability.

Apart from the economic policy change, the period (2003-2018) was characterized by relative political stability and the absence of significant weather shocks. The absence of significant shocks means that one can at least hope to identify the role of economic policy in the country's economic performance. Therefore, below we discuss Ethiopia's economic performance from 2003/04 to 2018/19 in a relatively detailed manner.
During this period, sustained and fast economic growth with less volatility was achieved. The average GDP growth rate was 9.6%, with a standard deviation of 3.3 (figure 2). As we will see in subsequent sections, this growth was mainly driven by large public

2 PASDEP (Plan for accelerated and sustained development to end poverty) is the second five-year development plan of the Federal Democratic Republic of Ethiopia

investments that are mainly financed through foreign borrowing. This, in turn, has led to issues of macroeconomic sustainability.

Figure 2: Ethiopia: economic growth, 2003–2019, percentages



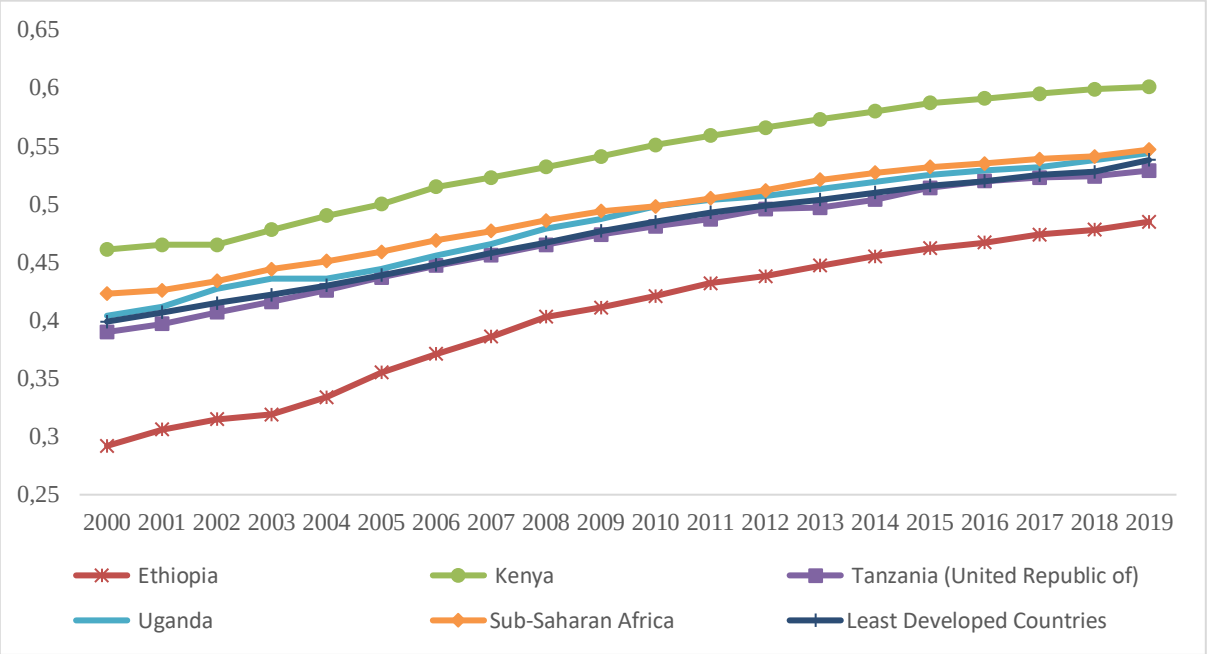
Source: NBE and author's calculation

2.3 Progress in Human Capital Development

The strong economic performance which the country has registered over the last two decades has also translated into significant progress in the human development index. As shown in figure 3, the country started at a much lower level of HDI than comparable developing countries. By 2019, it has closed most of the gap.3 In 2000, the HDI index of Ethiopia was just 70% of the sub-Saharan average and 63% of that of Kenya. By 2019, the HDI index of the country is 89% of the sub-Saharan average and 81% of Kenya's HDI. In other words, development in terms of life expectancy, education, and economic growth has been much faster in Ethiopia than in its regional and global peers.

Figure 3: Human Development Index: trend in Ethiopia and peer countries, index numbers

3 HDI is a composite index measuring average achievement in three basic dimensions of human development—a long and healthy life, knowledge, and a decent standard of living. See here for how it is calculated.



Source: UNDP (http://hdr.undp.org/en/indicators/137506#)

2.4 Sources of Economic Growth and Link to Structural Transformation

There are three measures of structural transformation usually employed in the literature: employment shares of sectors in total employment, value-added shares of sectors in total value-added, and export shares by sector as a share of GDP (UNCTAD, 2016).
In this section, we discuss each of these measures and their trend in Ethiopia. The aim is to understand if the economic growth we have seen above has been a catalyst for structural transformation.

2.4.1 Sectoral Distribution of Growth

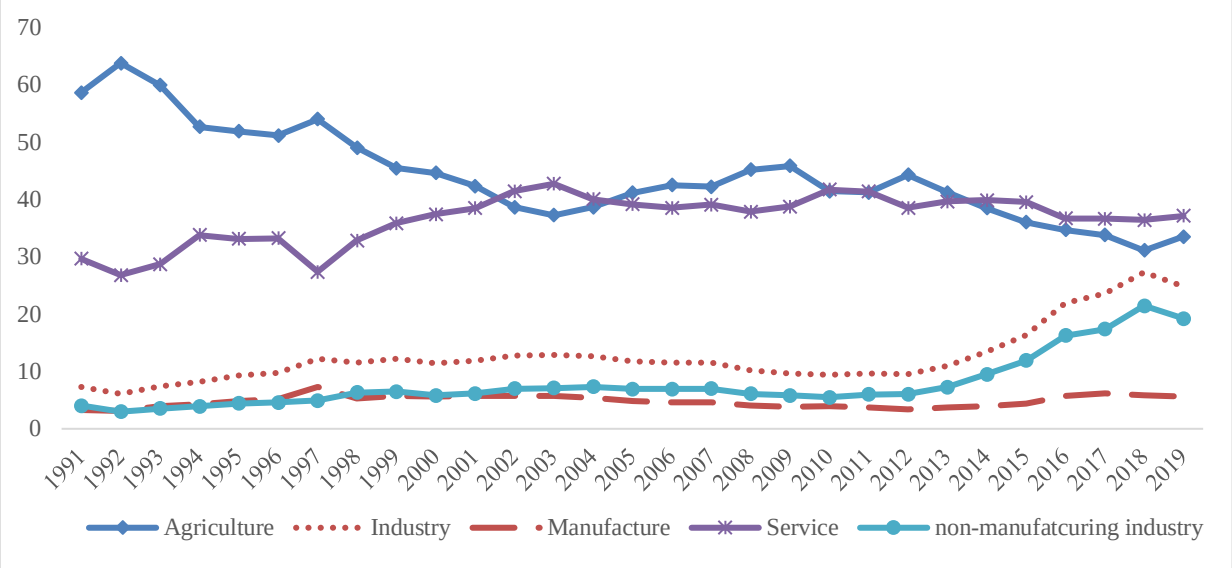
Over the last three decades, the share of the agriculture sector in the Ethiopian economy has declined sharply. It accounted for 63% of GDP in 1992. By 2019, this share has fallen to 33%. Ten percentage points of the decline were due to the growth in the service industry, and the other 20 percentage point decrease is accounted for by the rise in the industrial sector (figure 4). As shown in figure 5, though the share of the agriculture sector has declined significantly, it still employs the lion's share of the country's labor force (66% as of 2019). The combination of a declining share in GDP and a stable share in employment demonstrates the sector's low productivity.

The decline in the share of agriculture and the increasing share of industry, on the surface, looks like a desirable structural transformation in line with China and other

successful East Asian countries. However, a deeper look at the trend shows that most of the industry sector's growth is due to a sharp rise in construction rather than manufacturing. Specifically, the manufacturing sector still accounts for less than 6% of GDP. Although we do not have long time series data on the construction sector, its growth can be seen from the following data points. As of 2010, the construction sector contributed 4% of GDP. This share has increased to 17.5% by 2017.

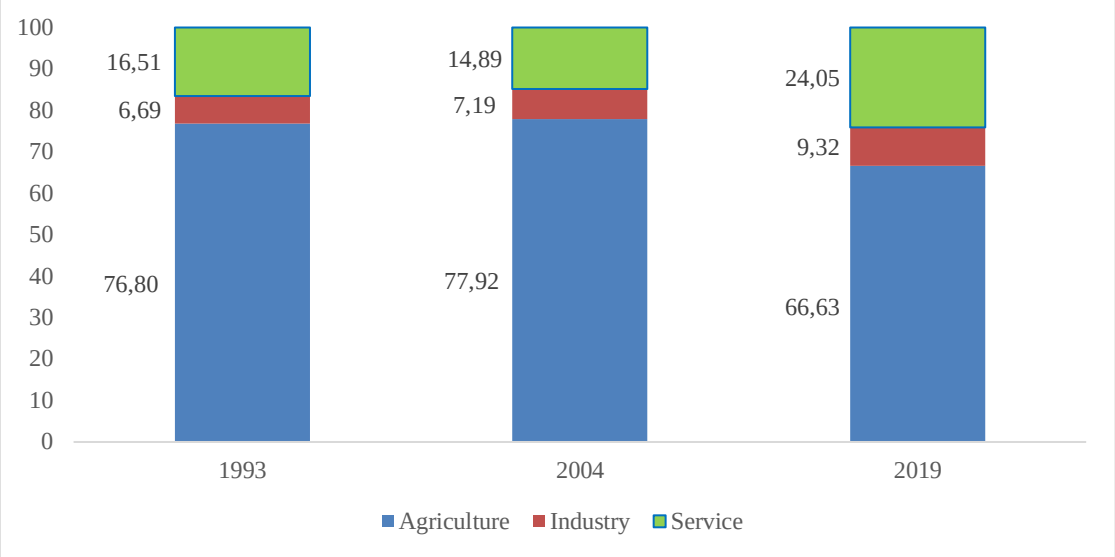
Throughout the last three decades, the manufacturing sector has contributed to less than 6% of the economy's growth. In contrast, industry has contributed for almost 50% of the growth of the economy since 2004. This clearly shows that the construction sector primarily financed by public investment is the driving force behind the robust growth post-2003.
However, international experience shows that this is not a recipe for a successful structural transformation. As Feng et al. (2020) show, a successful structural transformation such as China's, especially at the early stage, is accompanied by a strong manufacturing sector performance.

Figure 4: Ethiopia: trend in the sectoral composition of GDP, 1991–2019, percentages



Source: World Development Indicators (WDI)

Figure 5: Ethiopia: trend in the sectoral composition of employment, 1993–2019, percentages



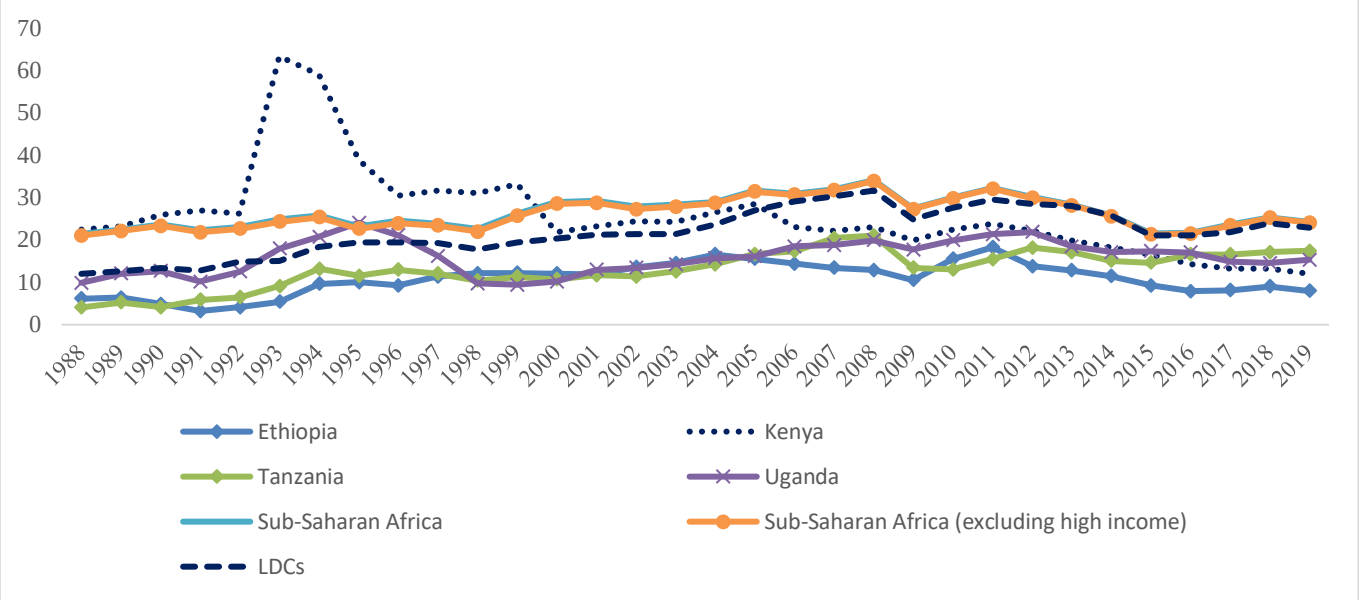
Source: WDI

2.4.2 Competitiveness

Another manifestation of a successful structural transformation is the ability to compete in the international market, especially in goods and services of higher complexity.

At the start of the market reform period (1991), the export-to-GDP ratio in Ethiopia was 3% of GDP, which is, far lower than its neighboring countries (10% in Uganda and 26% in Kenya) and 15% in the least developed countries. The export-to-GDP ratio increased steadily throughout the late 1990s and early 2000s to reach a peak of 17% in 2004. A relative decline in the export-to-GDP ratio in neighboring countries such as Kenya and Uganda and a stable export to GDP ratio in low-income countries means that Ethiopia was closing the gap in gross export to GDP ratio in the early 2000s.As discussed in the previous section, Ethiopia's economic growth has been much higher and stable since 2003. But the development was a result of public investment with construction as the driving sector. The export-to-GDP ratio paints a similar picture. Since 2004, with a slight blip around 2011, the export-to-GDP ratio has been steadily declining, with GDP growth outstripping the negligible improvement in exports. This trend is more pronounced if one looks at just merchandise exports. Merchandise exports as a share of GDP has declined from 9.5% in 2011 to 2.8% in 2020.

Figure 6: Export of Goods and Services as a Share of GDP in Selected Countries,1988-2019, percentages



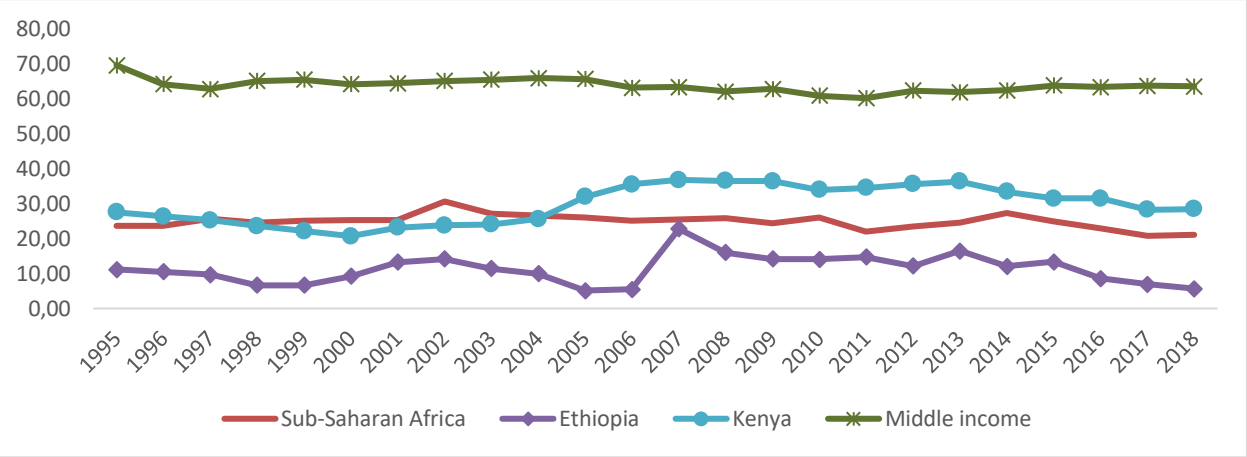
Source: WDI and Author's calculation

Aggregate export to GDP ratio measures the openness of the economy and the capacity to generate foreign currency. To assess whether the country's economy is undergoing a structural transformation, we need to see a change in the composition of exports away from primary products to manufacturing and other goods and services that are characterized by higher labor productivity and technological complexity.

Figure 7 shows that the share of manufacturing goods in merchandise exports of the country has been declining since 2007. By 2008, manufacturing goods comprise only 5.63% of the country's merchandise exports. In comparison, manufacturing is 21% of merchandise exports in Sub-Saharan African countries, 28.4% in Kenya, and 63.5% in Middle income countries.

The low and declining share of manufacturing export in Ethiopia is indicative of the fact that the economic growth over the last two decades has not resulted in the desired structural transformation.

Figure 7: Exports of Manufactured Goods as a Share of Merchandise Exports, 1995–2018, percentages

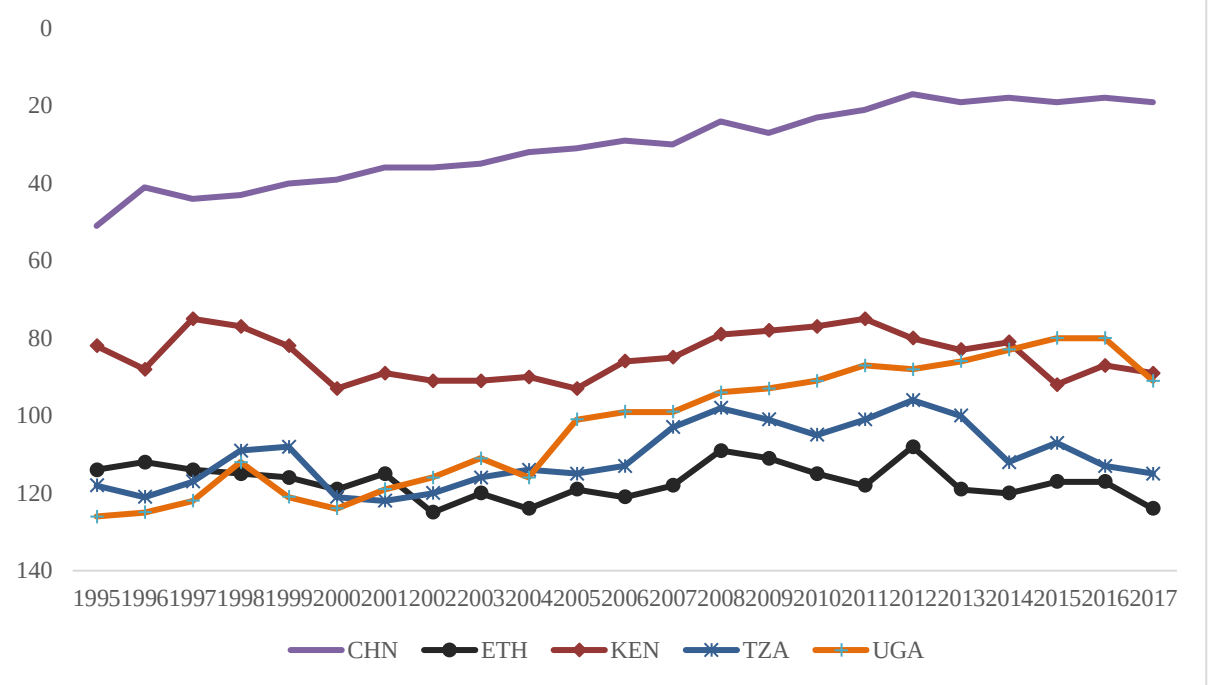


Source: WDI and Author's calculation

Export of manufactured goods is one indicator that helps us measure whether the country is achieving structural transformation. The argument is that exporting manufacturing goods requires more sophisticated technology and involves more complex global value chains. An indicator that directly measures these aspects is economic complexity. The Economic Complexity Index (ECI) is a measure of the amount of capabilities and knowhow of a given country determined by the diversity, ubiquity, and complexity of the products it exports.

The complexity of Ethiopia's economy, in comparison with its peers, was increasing in the early 2000s. However, the country's rank in economic complexity has been in a declining trend since 2008. As a result, the country's export complexity rank is below where it was in 1995.

Figure 8: Export complexity index, Ethiopia and comparator countries, 1995–2017, index numbers



Source: Harvard Growth Lab4

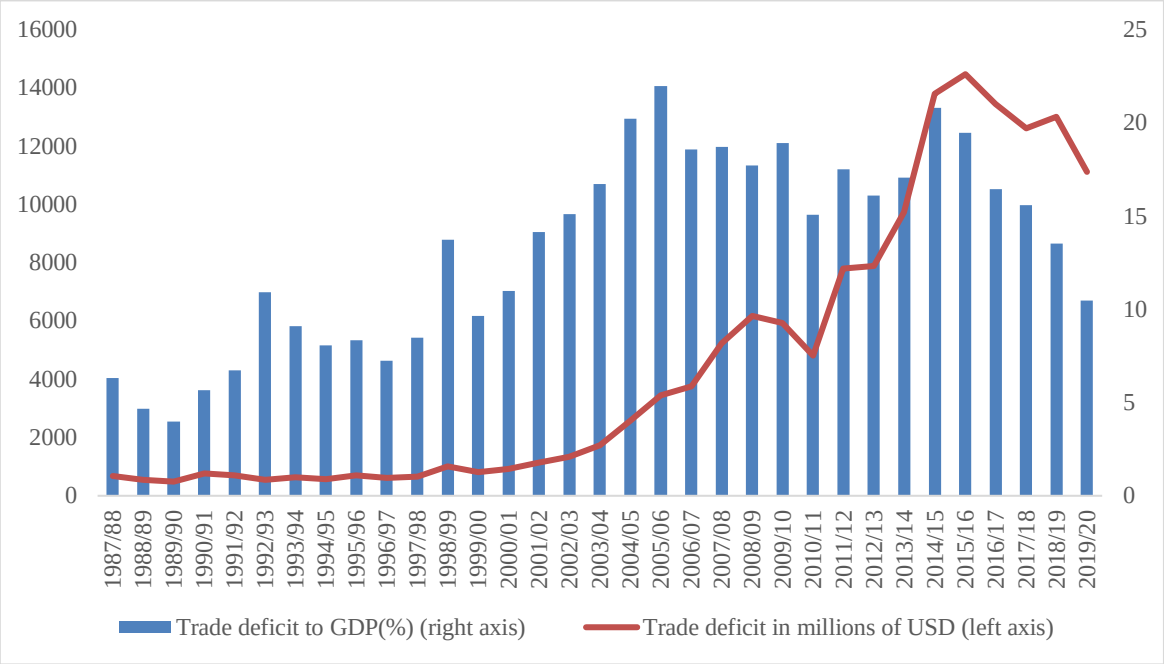
In summary, although the country's economy grew substantially over the last decade and a half, its performance in terms of structural transformation leaves a lot to be desired. Specifically, shift towards the construction rather than manufacturing sector dominates the change in sectoral composition, primary and agricultural products still makeup the biggest share of the export of the country, and its rank in economic complexity is declining even compared to peer countries.

2.5 Current Account Deficit and Financing

As alluded to in the preceding sections, the stable and significant economic growth registered in the post-2003 period results from public investment that is mainly financed through an external borrowing. The flip side of significant external borrowing is large trade deficits. The average trade deficit between 1991 and 2003 was 10%. It increased to 17% in the 2003-2020 period.

4 See https://dataverse.harvard.edu/dataset.xhtml?persistentId=doi:10.7910/DVN/XTAQMC.

Figure 9: Ethiopia: trend in trade deficit, 1987–2020



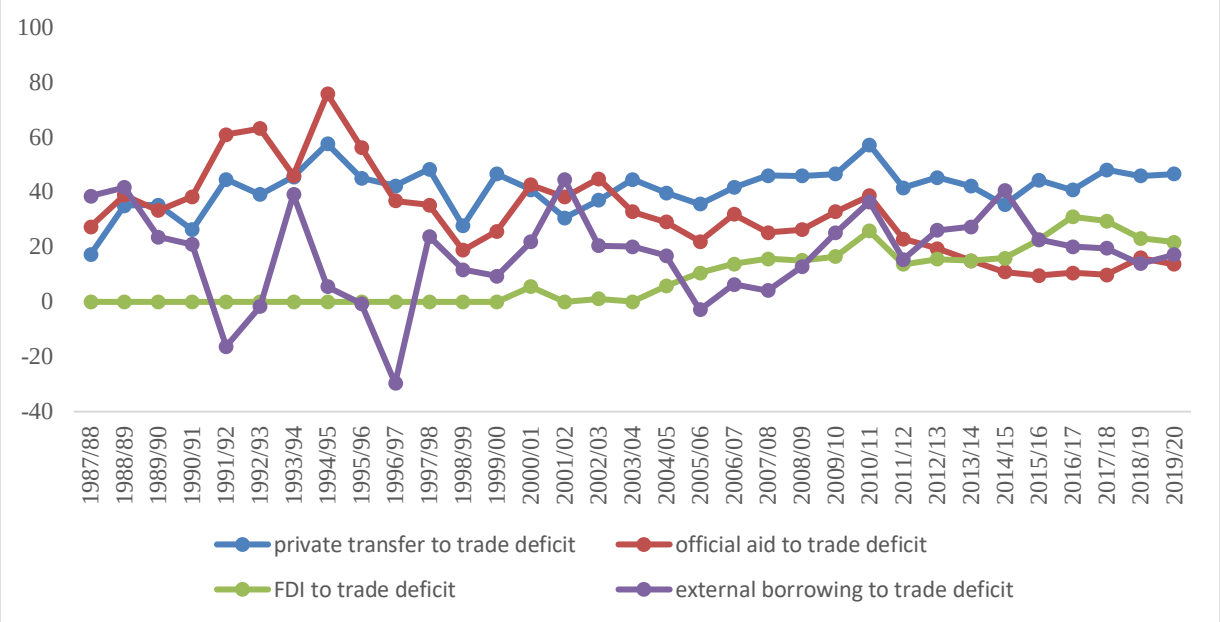
Source: NBE and author's calculation

The persistent high trade deficit was predominantly financed through three sources. First, private transfers have been steadily increasing throughout the period, reaching $6 billion in 2017/18. 85% of private transfers, on average, are due to remittances. Remittances have been the most stable and the highest source of trade deficit financing in the country for all years.

Official assistance has been a significant, albeit volatile, financing source in the 1990s. Its role has been steadily decreasing since 2003/04 and reached a low of 10% in 2017/18. FDI and external borrowing replaced the role of foreign aid in the post-2003 period. However, reflecting the reform introduced by the government to rectify the debt stress problem, foreign borrowing's role has been declining since 2015/16.

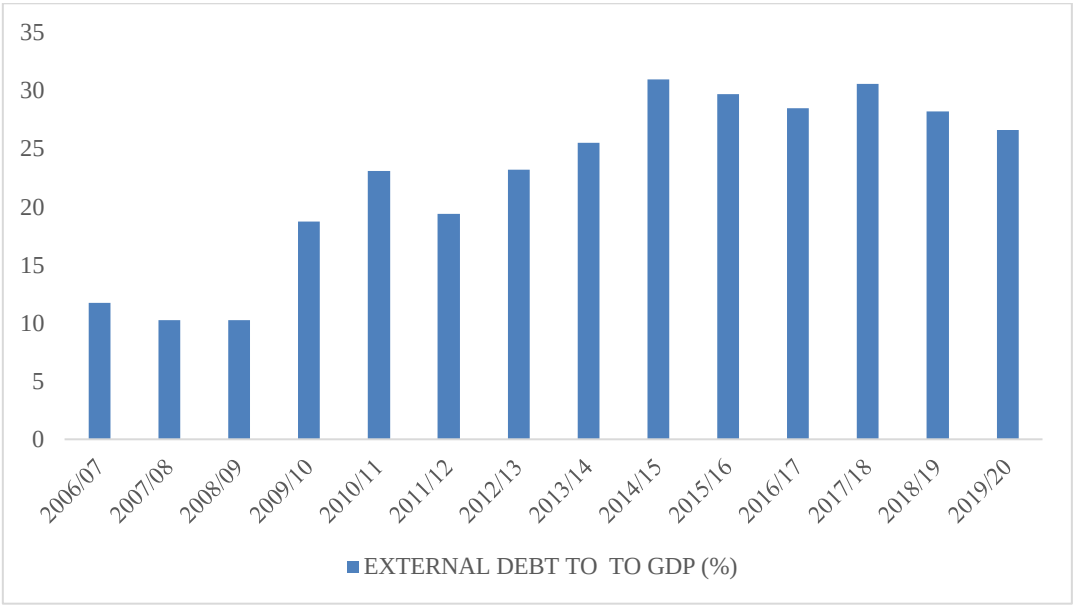
FDI was almost nonexistent in the country until the early 2000s. Since 2003/04, it picked up speed and became a significant source of financing for the country, reaching as high as 31% of the trade deficit. However, it is showing signs of a significant decline in the last four years.

Figure 10: Ethiopia: sources of trade deficit financing, 1987–2020, percentages



Source: NBE and author's calculation

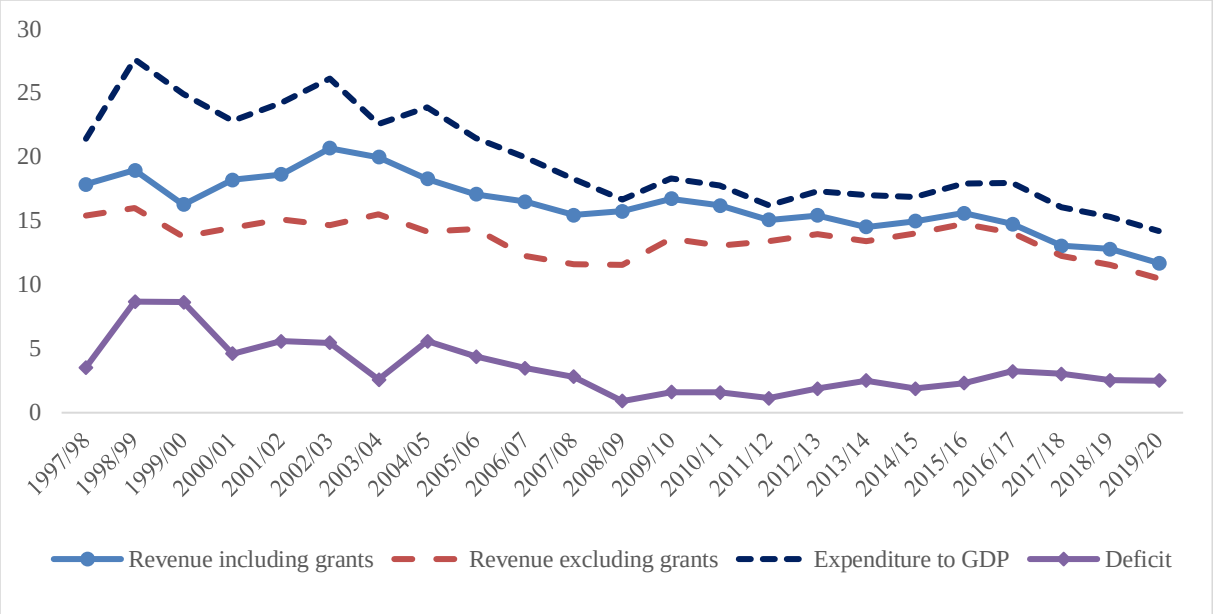
Figure 11: Ethiopia: evolution of external debt, 2006–2019, percentages of GDP



Source: Ministry of Finance, Debt Bulletin, various editions

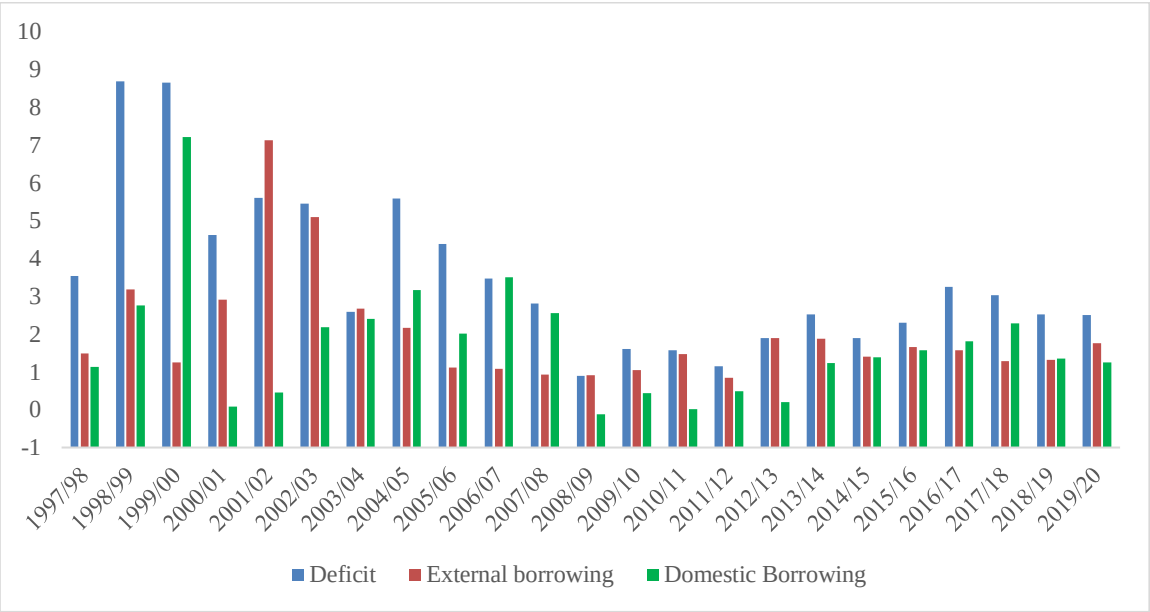
2.6 Fiscal Policy

Figure 12: Ethiopia: revenue, expenditure, and deficit of the general government, 1997–2020, percentages of GDP



Source: Ministry of Finance

Figure 13: Ethiopia: sources of deficit financing, 1997–2020, percentages of GDP



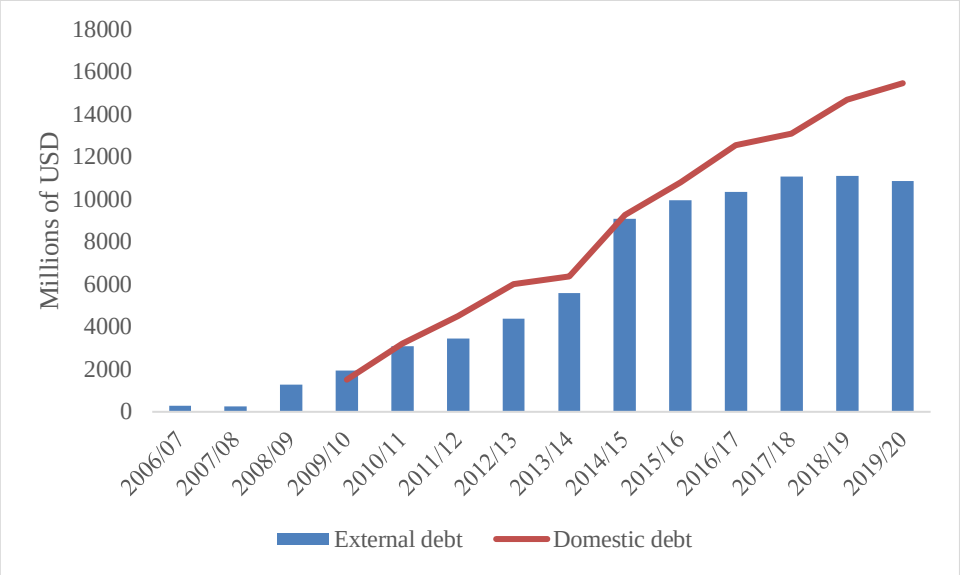
Source: Ministry of Finance

The budgetary institutions of the Ethiopian government have been running a stable and low deficit. Before the 2003/04 period, 63% of the deficit was financed through foreign borrowing, 33% through domestic borrowing, and the rest largely through privatization proceeds. After the 2003/04 period, the role of external borrowing is similar as the preceding period. However, domestic borrowing has come to play a larger role. On average, it covers 52% of the deficit financing. In fact, over the last five years, the role of domestic borrowing as a source of deficit financing has further expanded to cover 63% of the deficit.

One crucial caveat of the preceding discussion is that the stable and low deficit hides the fact that it only applies to "budgetary institutions". Since the government (public sector) conducts most of the large public investments through SOEs, a look at the overall spending of the public sector is most informative.

As Figure 14 shows, both external and domestic debts of SOEs have been expanding in the second half of the 2000s and in the 2010s. Most of the domestic debt of SOEs is sourced from the Commercial Bank of Ethiopia.5 In the next section (monetary policy) we discuss the implications of these arrangements.

Figure 14: Ethiopia: external and domestic debt of SOEs, 2005–2020



Source: MOF and authors'' calculations

5 Note that the Commercial Bank of Ethiopia accounts for 57% of domestic deposit mobilization as of 2019/20.

2.7 Monetary Policy, and Inflation

The capital account of the country has been closed since the 1970s. The country is able to conduct a crawling peg exchange rate regime while having control over monetary policy. Therefore, we discuss the two topics separately.

The overall monetary policy framework of the country can be deduced from the status of the NBE. In the period under discussion, the status of NBE is reformed in two establishment proclamations (1994 and 2008).

The 1994 proclamation de facto establishes the fiscal dominance of monetary policy in the country. It specifically stipulates that NBE is required to meet the government's requests for credits and advances each year. This arrangement lifts the borrowing limits that had been set in previous proclamations. The independence of the NBE is further eroded in the 2008 proclamation which make NBE accountable to the Prime Minister. Furthermore, guided by the developmental state philosophy, NBE's mandate was shifted from balanced growth (maintaining the balance between price stability and economic growth) to enabling rapid economic growth. In particular, the 2008 proclamation abolishes the limit set in 1994 regarding NBE financing of government deficit.

A look at the role of NBE in financing the fiscal deficit and enabling financing of SOEs starkly delivers the above point. The outstanding direct advance to GDP ratio averaged 8 per cent between 2007/07 and 2018/19. In addition to direct advances, the NBE also provides indirect finance to the government. As noted by Chauffour and Gobezie (2019: page 10)

"*The NBE also provides indirect financing to the government by extending credit to the Development Bank of Ethiopia (DBE) to purchase T-bills. In 2017/18, such credit amounted to Birr 17 billion. Thus, the total direct and indirect financing of the government by the NBE amounted to Birr 41.5 billion in 2017/18. In addition, the NBE provides indirect financing of SOEs by granting liquidity to the Commercial Bank of Ethiopia (CBE) in the form of 5-year bonds, which amounted to Birr 27 billion in 2016/17.*"

Another aspect of monetary policy is the interest rate in the bond market. As the government follows a financial repression strategy to finance its functions, the interest rate on the bond market is set at a low value and is subscribed only by captive segments of the financial sector.

For instance, as of 208/19, the average yield for a 28-days, 91-days, 182-days, and 364-days T-Bill was 0.789%, 1.203%, 0.639%, and 4.325%, respectively. This is in the face of average inflation of 13.7% in 2018/19. Since the yield on these instruments is unattractive to the private sector6, almost the entire T-bill is financed by social security funds.

6 Note that the interest rate on saving deposits in commercial Banks was 7% as of October 2017.

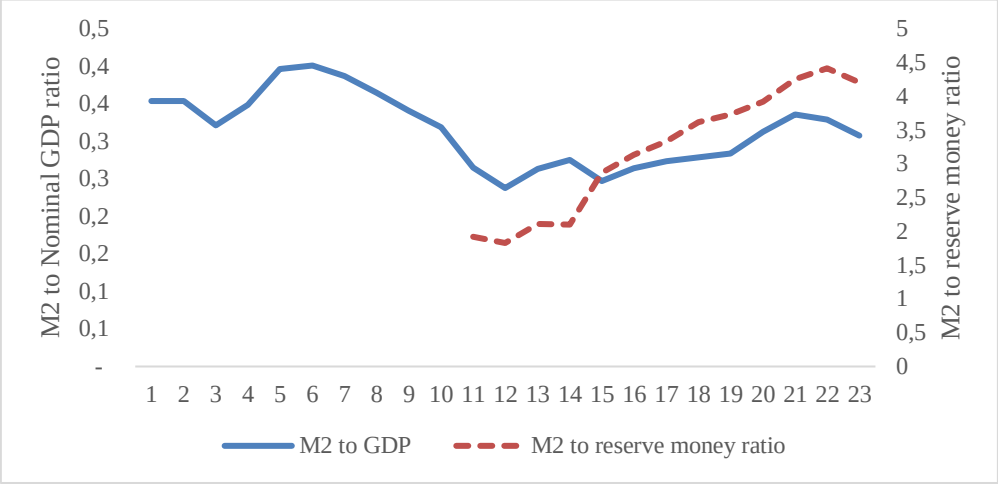
In addition, the minimum interest rates on savings and time deposits accounts are set by law. In the 1990s and for most of the 2000s, the minimum savings interest rate was 5%. It was changed to 7% in October 2017. Banks are free to charge any interest rate on the loans they extend. The government introduced a rule that requires that commercial Banks allocate 27% of their loan portfolio to purchase NBE bond that is then transferred to the Development Bank of Ethiopia. The idea is that the Development Bank of Ethiopia will allocate the proceeds to investment in sectors that have long term development impact but are not catered to by the existing commercial Banks. The 27% Bonds have a yield of 5% which implies that the Commercial Banks are forced to purchase them at a loss (i.e., using a deposit that yields 7%).

As the preceding discussion shows, the degree of financial repression means that the NBE is not able to conduct monetary policy by deploying indirect instruments. As a result, the NBE conducts monetary policy by setting broad money (M2) growth to be in line with the growth of nominal GDP7. The Bank operationalizes its policy through targeting the growth of reserve money. In other words, the monetary policy regime hinges on the existence of a stable "money multiplier" and velocity of money.

Figure 15 and the preceding discussion underline three crucial factors about monetary policy in the country. First, the reserve money to broad money ratio has been steadily increasing over time. That means the relationship between the operational target (M0) and the intermediate target (M2) of monetary policy is not stable. As a result, the effectiveness of monetary policy is likely to be limited. Second, the ratio of M2 to nominal GDP (i.e., velocity of money) is not constant. Therefore, even if the monetary authorities meet their intermediate target, there are several occasions when they would miss their final target. Third, monetary policy accommodates all supply and demand shocks that do not emanate from money supply itself. Money supply is allowed to grow at the same rate as nominal GDP. Suppose there is demand shock that comes from increased remittance flows. That is allowed to affect both price and GDP without any response from monetary authorities.

7 NBE (2009)

Figure 15: Ethiopia: velocity of money and money multiplier



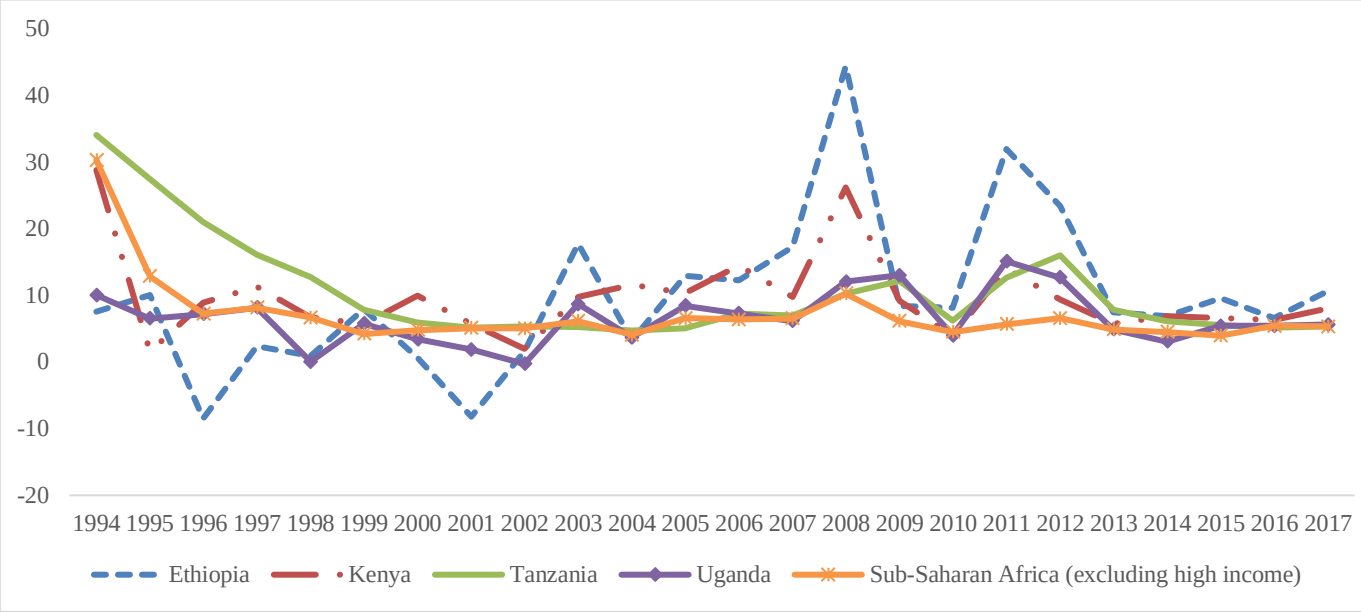
Source: NBE and authors' calculations

The inflation trend in the country reflects the accommodating nature of monetary policy and fiscal dominance. For instance, in 2008 and 2011, there was a global commodity price shock. Ethiopia and the peer countries experienced higher inflation in those years. However, inflation was much lower in neighboring countries such as Kenya, Uganda, and Tanzania.

As we mentioned above, monetary policy in Ethiopia accommodates both demand and supply shocks. The higher average inflation in the post 2003 period reflects the fact that monetary policy did not counteract the increase in demand that follows the rise in public spending8. Average inflation in Ethiopia in the post 2003 period is 15.13% whereas it is 9.31%,7.06%, and 6.94% in Kenya, Tanzania, and Uganda, respectively.

8 Note that public here means budgetary government institutions and state-owned enterprises.

Figure16: Inflation: Ethiopia and selected peer countries, 1994–2020, percentages



Source: WDI and authors' calculations

2.8 Foreign Exchange Policy

When Ethiopia emerged from the communist regime and civil war, the first initiative was to devalue the Birr from 2.7 Birr/USD to 5 Birr/USD in 1992. The country followed a crawling peg exchange rate arrangement throughout the 1990s with a 7% average annual depreciation of the Birr vis-à-vis the USD. Other than the depreciation of the Birr, several of the foreign currency controls that were introduced in 1977 persist throughout the 1990s and continue to be relevant to this day.

Below we discuss several restrictions that prevail in the country during the period covered in this paper (2000-2018).

First, exporters and remittance recipients must surrender 70 percent of their account balances and convert them into Birr after 28 days[9]. Commercial banks are in turn supposed to surrender 30% of these proceeds as well as the foreign currency they receive via remittances to the National Bank of Ethiopia. In addition, commercial banks are required to allocate their foreign currency holdings to the business community and the general public based on priorities set by the government and on a first come first

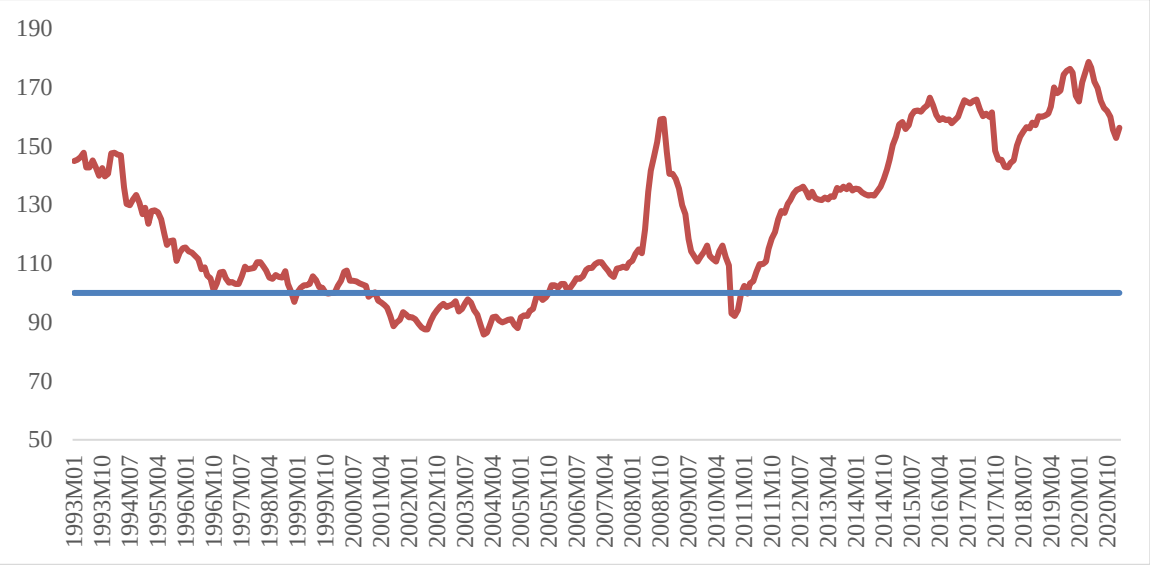
9 They can keep 30% of the proceeds for indefinite period and use for importing materials or services that are pertinent to their business. Refer to National Bank of Ethiopia: The Retention and Utilization of Export Earnings Directives No. Fxd/02/1996.

served basis10. Exporters are therefore excluded from utilizing their foreign currency earnings unless they import the list of goods specified by the government. And they also surrender their foreign currency at an overvalued Birr to USD rate. As a result, most exporters in the country are also importers.

Second, the middle rate for transactions in foreign exchange has been set by the National Bank of Ethiopia since 1977. Banks are free to buy foreign currency within 0.5% of the middle rate and sell within 1.5% of the rate set by the National Bank. Therefore, the rate which the National Bank sets is the only relevant parameter that determines the exchange rate of the Birr and the extent to which a parallel market develops.

In the early 1990s, the frequency at which the peg was adjusted was sufficient to keep up with the inflation differential between Ethiopia and its trading partners. As a result, the real exchange rate depreciated for most of the period (see figure 17).

Figure 17: Ethiopia: real exchange rate, 1993–2020 11



Source: Darvas, Zsolt (2012a)

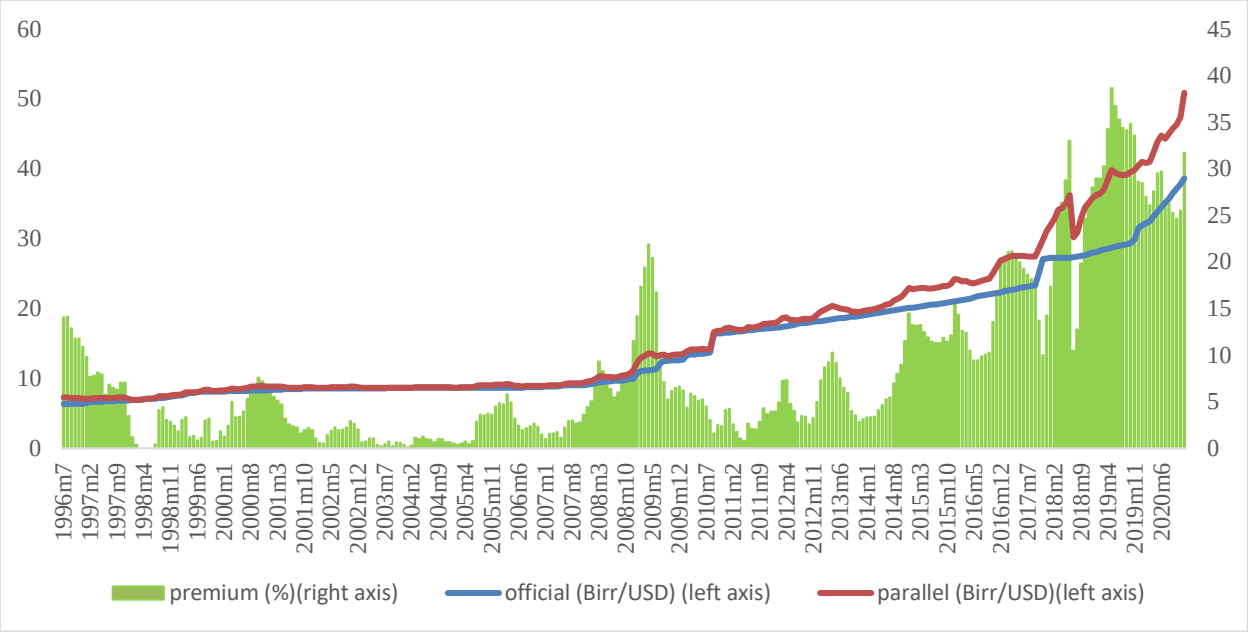
Since the start of the public investment driven growth (post-2003), inflation picks up speed. The crawling rate of the official exchange rate was insufficient to keep up with the inflation differential between the country and its trading partners. As a result, the real exchange rate has been appreciating for almost all years since 2003. The appreciation was interrupted for a very short time intermittently through a sharp devaluation by the

10 National Bank of Ethiopia: Transparency in Foreign Currency Allocation and Foreign Exchange Management Directives No. FXD/45/2016

11 Note: the baseline is January 2000. So, when reading the figure one should note that the value in each month is compared to 100 in January 2000.

government. figure 17 and figure 18 show that the foreign exchange arrangement in the country has led to an overvaluation of the Birr and the building up of premium in the parallel market.

Figure 18: Ethiopia: official and parallel exchange rates of the Birr against the USD, 1996–2020



Source: NBE

The literature shows that a competitive real exchange rate is an essential ingredient of successful industrialization and structural transformation policy (Johnson, Ostry, and Subramanian (2007), Rodrick (2008), Rapetti, Skott, Ramzi (2009, 2012), and Guzman, Ocampo, Stiglitz (2018)). Over the last decade, domestic currency appreciation has been a drag on the country's diversification and improvement of export performance.

2.9 Summary

The trends discussed in the preceding sections can be summarized as follows. Growth has been higher and less volatile since the early 2000s. But this development is a result of public investment that is directed to the construction sector. That means the shift in the sectoral composition of production was inward-oriented. As a result, there was a negligible improvement in export volume and diversification. The combination of the high volume of imports necessary for investment in infrastructure and the stagnant export means a large trade deficit. The deficit was mainly financed through debt which has created the debt stress scenario observed in the country over the last few years.

3 Comparison of Economic Performance: Ethiopia and China

This section compares the path that China has taken in its development with recent trajectories of the Ethiopian economy. The aim is to highlight potential promising areas and challenging aspects that need to be attended to for a successful structural transformation in Ethiopia. Drawing lessons through comparison of the experience of two countries requires one to choose which periods in each country one has to consider.

The reason is that appropriate policies depend on the development stages of countries. For instance, when a country reaches the technological frontier, FDI would not be necessary as a means of importing technology. Similarly, when a country is successful in export and has build sufficient reserves, current and capital account openness carry less risk than at early stages of development.

China, at the current stage, has climbed the development ladder much further than Ethiopia. If we compare current day China with current day Ethiopia, we may end up drawing the wrong lesson. Therefore, we need to compare the two countries' policies when they are in comparatively similar development stages[12]. For our analysis, we focus on the period 1980 to 1999 in China and 2003 to 2020 in Ethiopia.

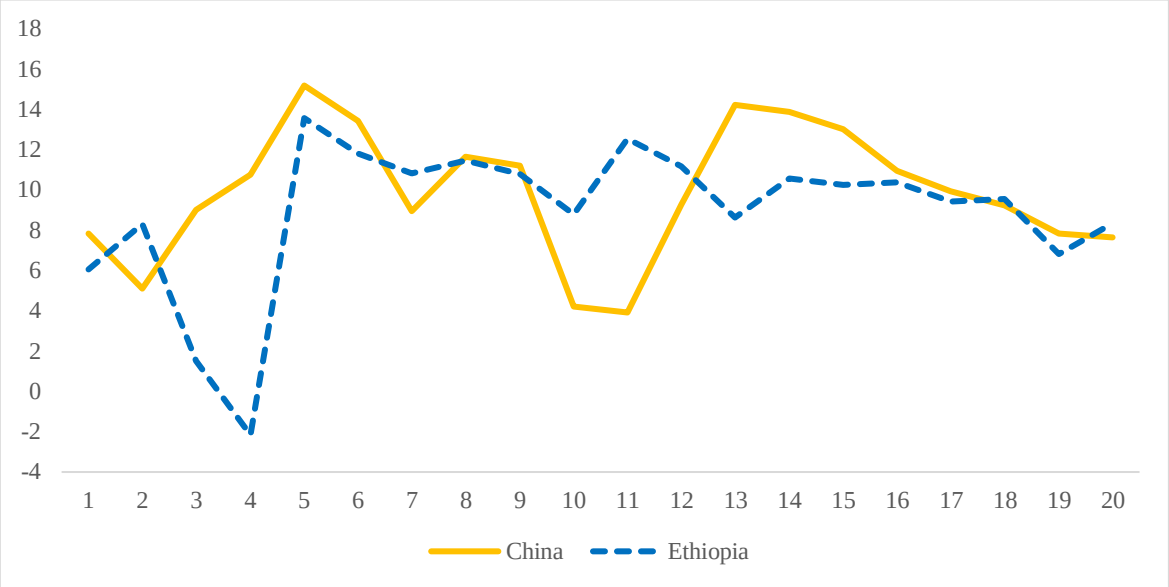
3.1 Real GDP growth

China has been able to maintain fast and stable economic growth over four decades. As figure 19 shows, Ethiopia's growth trajectory tracks China's growth closely in the relevant comparison period. The average growth rate in China between 1980 and 1999 was 9.8%. In Ethiopia, during the 2000 to 2019 period, GDP grew by 8.9%. If we skip the drought year (2002/03), GDP in Ethiopia grew by 10%.

In addition, the growth in both countries has been relatively stable. The volatility of growth measured by the standard deviation of the growth in real GDP was 3.2% in China and 3.6% in Ethiopia.

12 Note that comparing the experience of China and Ethiopia when they were at similar level of development also has its own drawbacks. For instance, there was a large open market for Chinese exports of light manufacturing. Currently, many developing countries are attempting the same strategy. Therefore, the competition may be a lot tougher. Also, the role of robots in disrupting the strategy of cheap labor for light manufacturing shouldn’t be discounted.

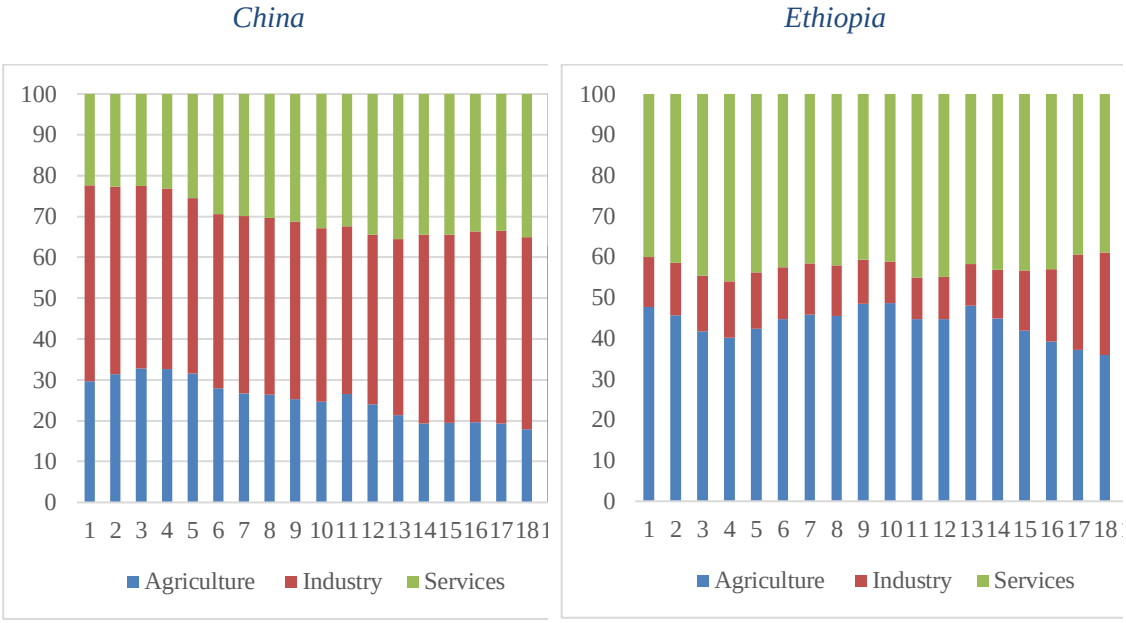
Figure 19: China and Ethiopia: annual real GDP growth, selected periods, percentages



Note: 1 stands for 1980 in China and 2000 in Ethiopia. 20 stands for 1999 in China and 2019 in Ethiopia.

Source: WDI

Figure 20: China and Ethiopia: sectoral composition of GDP, selected periods, percentage shares



Note: 1 stands for 1980 in China and 2000 in Ethiopia. 20 stands for 1999 in China and 2019 in Ethiopia.

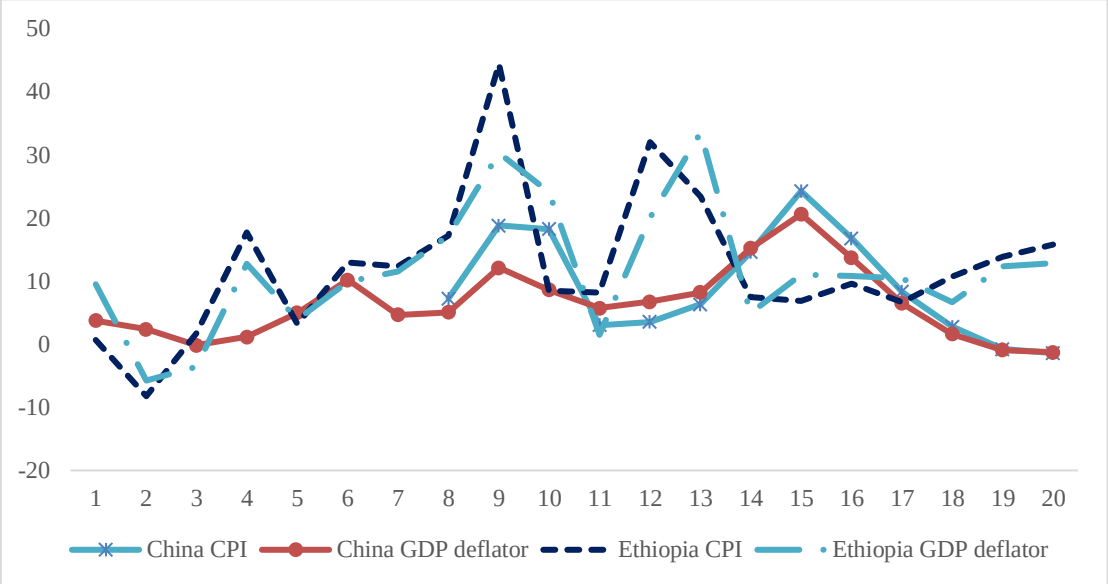
Source: WDI

Although growth in the two countries in their initial development phase tracks closely, the shift in the economy's structure was starkly different. In both countries, economic growth was accompanied by a shift away from agriculture. However, the entire 14% shift away from agriculture in China is towards the service sector, leaving the industry sector's share unchanged. In Ethiopia, a similar (14%) shift away from agriculture is entirely to the benefit of industry. However, the manufacturing sector loses ground in Ethiopia (from 9% in 2000 to 6% in 2019). In China, on the other hand, the manufacturing sector performed very well. At the end of the comparison period, the manufacturing sector contributes more than 30% of GDP in China.

3.2 Inflation

Inflation in the early growth process of China was relatively low and stable except for a couple of years of sharp increases. In comparison, Ethiopia's inflation has been much higher and more volatile at a similar development level. Average inflation in Ethiopia over the 2000-2019 period was 12.24% and 11.69% measured in CPI and GDP deflator. The volatility of inflation was 11.5% and 9.6%, respectively. In China, average inflation measured in CPI and GDP deflator was 9.4% and 6.4 respectively during the 1980-1999 period. Volatility of inflation was also much lower in China, with a standard deviation of CPI and GD deflator inflation at 8 and 5.6%, respectively.

Figure 21: Ethiopia and China: inflation, selected periods, percentages



Note: 1 stands for 1980 in China and 2000 in Ethiopia. 20 stands for 1999 in China and 2019 in Ethiopia.

Source: WDI

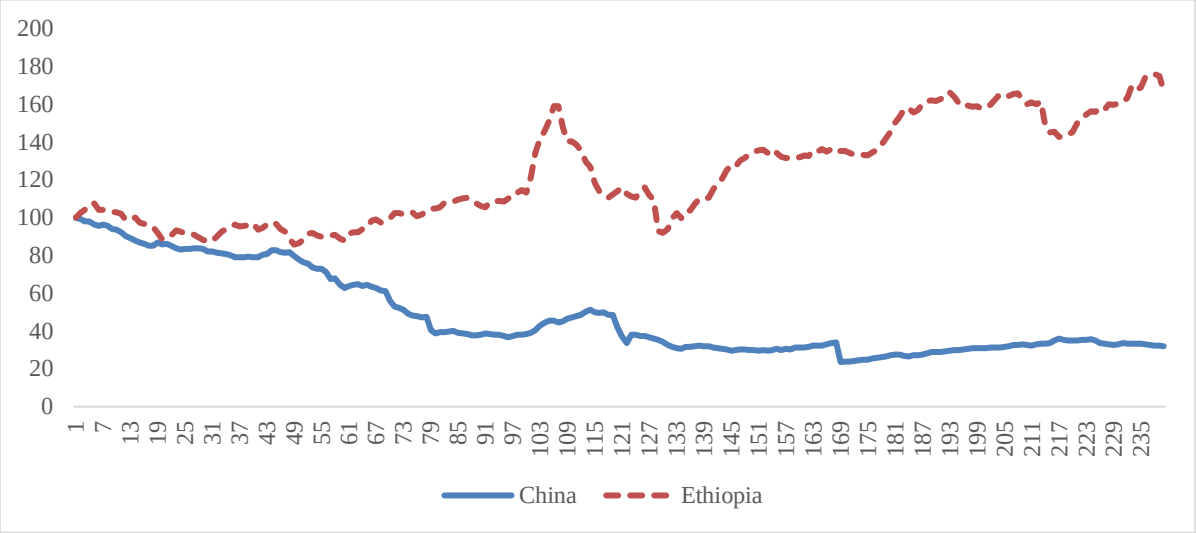
As emphasized by Feng et al. (2020), China's success in maintaining stable economic growth and inflation can be attributed to government interventions aimed at limiting excessive investment, controlling the size of infrastructure construction, and putting a lid on inflation when the economy was about to overheat. Similarly, when the economy was about to go into recession, the Chinese government accelerated the exit of outdated capacity, drove capacity clearing, and simultaneously expanded infrastructure construction, stimulating aggregate demand. According to Feng et al. (2020), the Chinese authorities have used three kinds of policy tools, namely 1) market approaches using fiscal and monetary policy to control aggregate demand, 2) administrative orders by way of controlling new investment projects, and 3) controlling land approvals and credit granting and restricting house purchasing in real property markets of key cities.
We discuss the monetary policy environment in Ethiopia and how it contrasts with the case of China in section 4 below.

3.3 Competitiveness (Real Exchange Rate) and External Finance

The macroeconomic literature (Johnson, Ostry, and Subramanian (2007), Rodrick (2008), Rapetti, Skott, Ramzi (2009, 2012), and Guzman, Ocampo, Stiglitz (2018)) find the following four regularities in terms of the relationship between the real exchange rate (RER) and economic growth/structural transformation. 1) RER appreciation and economic growth are negatively associated; 2) the relationship is observed more strongly in developing countries; 3) the relationship is non-linear, implying that moderated undervaluation spurs growth, but high undervaluation undermines it; 4) undervaluation of the real exchange rate is associated with better performance of tradable sectors in general and the industry sector in particular. Haddad and Pancaro (2010) stress that undervaluation is only successful in the medium term and is not successful in the long run. The consensus is that a competitive real exchange rate is an important tool in the development policy toolbox.

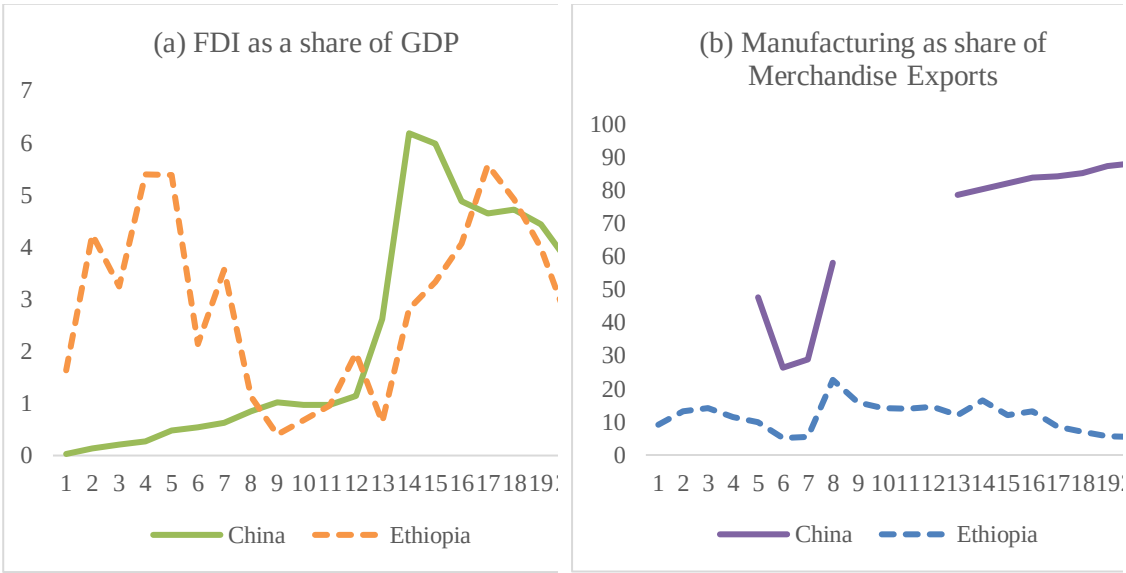
Figure 22 shows that the real exchange rate was relatively stable during China's initial structural transformation (1980-1999). On the other hand, in Ethiopia, the real exchange rate has been steadily appreciating since 2003. In other words, the period of fast growth in the country brought about by significant public investment has also been characterized by real exchange rate appreciation. The appreciation has contributed its share to Ethiopia’s dismal export performance.

Figure 22: Ethiopia and China: real exchange rate, 1993–2020 13



Note: In the horizontal axis 1 stands for January 1980 in China and January 2000 in Ethiopia. 241 stands for December 1999 in China and December 2019 in Ethiopia.
Source: Darvas, Zsolt (2012a) for Ethiopia, and IFS for China14

Figure 23: China and Ethiopia: FDI as a share of GDP and manufactured exports as a share of total merchandise exports, selected periods, percentages



Note: 1 stands for 1980 in China and 2000 in Ethiopia. 20 stands for 1999 in China and 2019 in Ethiopia.
Source: WDI

13 Note: the baseline for Ethiopia is January 2000 and January 1980 for China. So, when reading the figure one should note that the value in each month is compared to 100 in January 2000 for Ethiopia and January 1980 for China.
14 https://data.imf.org/?sk=4C514D48-B6BA-49ED-8AB9-52B0C1A0179B&sId=1390030341854

Reflecting the difference in real exchange rate alignment and other structural differences, China has been much more successful in exporting manufactured goods even at the early stages of its reform period (figure 23 b). Consistent with the pattern we observed in previous sections, Ethiopia's export is low in volume (and value) and much more focused on primary goods. Transitioning to the export of manufactured goods has been a significant challenge.

One possible source of the challenge in transitioning to exporting manufactured goods is the shortage of local capabilities. At least at the initial stages, successful structural transformation requires complementing local capabilities with foreign direct investment. In this regard, Ethiopia, initially, has been more externally oriented and attracted FDI. But the flow of FDI in the country has been volatile. Also, it has started to decrease significantly before the country has succeeded in transitioning to the export of domestically manufactured goods. Therefore, sustaining FDI flow to the manufacturing sector is a policy challenge in the coming years.

The recent decline in FDI is mainly the result of uncertainty that is caused by the volatile political transition the country is going through15,16. Therefore, political stability would play a much more significant role than any macroeconomic policy the country undertakes.

4 Lessons from China: the role of Policies

Volatile inflation, an uncompetitive real exchange rate (overvaluation), volatile and recently declining FDI, and reliance on debt financing characterize the Ethiopian economy over the last two decades. However, the lesson from China is that these are not what makes a conducive environment for a successful structural transformation. In this section, we discuss the policy environment in Ethiopia vis-à-vis China to tease out potential lessons that can be learned.

4.1 Monetary Policy Conducive to Investment and Export

One aspect of China's macroeconomic policy is a proactive business cycle management. According to Feng et al. (2020), the government uses three pillars of macroeconomic management. (i) market approach such as monetary policy (2) administrative approach such as halting of construction when the economy is "too hot" (3) institutional reform.

15 https://country.eiu.com/ethiopia
16 IMF Country Report No. 20/29

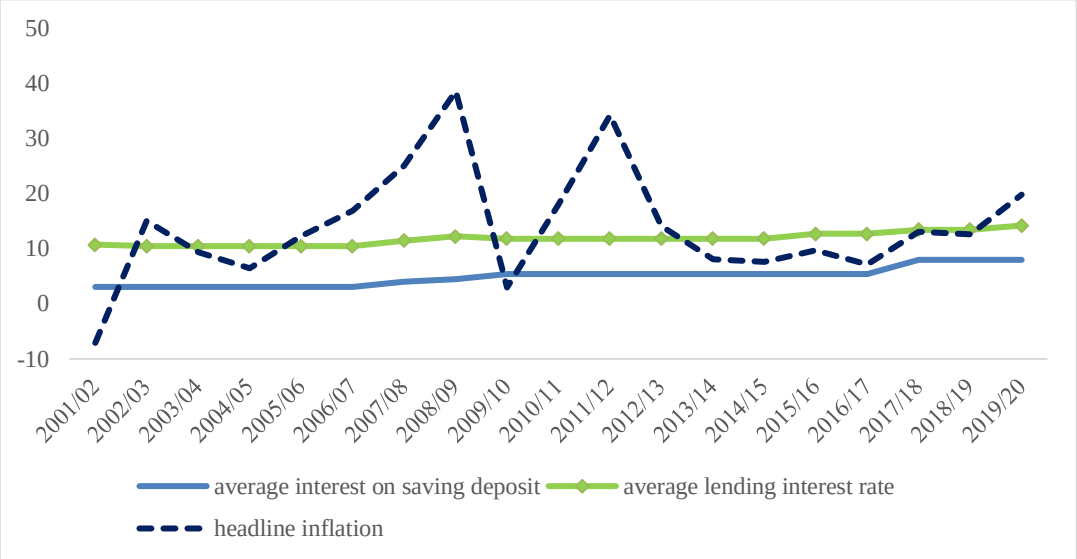
In the market approach, pro-active monetary policy plays a significant role. The government adjusts policy instruments such as the savings and deposits rate and required reserve ratios to influence the investment behavior of firms and the savings and consumption behavior of households.

In Ethiopia, on the other hand, monetary policy plays a passive role. In particular, the National Bank acts as a financier of the government's deficit and focuses on maintaining robust growth rather than price stability.

As we point out in section 2.7, the monetary policy strategy of the government is to keep the growth of broad money in line with the growth of nominal GDP. In other words, all demand and supply shocks that do not emanate from monetary policy are accommodated.

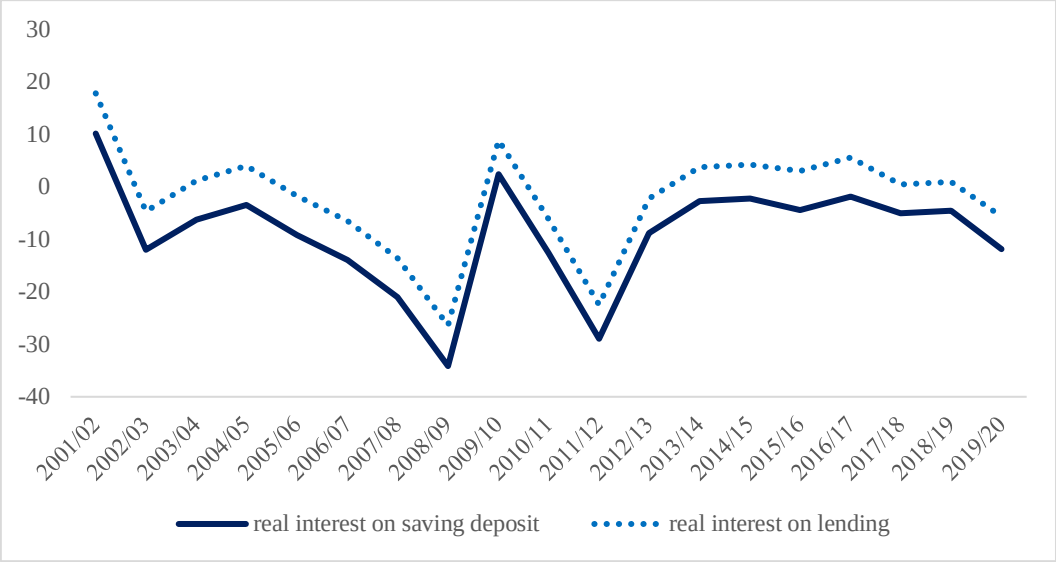
Another aspect of monetary policy that plays a significant role in determining long-term investment and saving behavior of, at least, the private sector is market interest rates. In this respect, Ethiopia's monetary policy regime is characterized by financial repression, with both savings and lending interest rates kept low. As shown in figure 24, both saving and interest rates barely change over the years despite a volatile and, on average, high inflation. As a result, the real interest on savings has always been negative, reaching as low as -34% in 2008/09 (see figure 25).

Figure 24: Ethiopia, interest rate and inflation, 2001–2020, percentages



Source: NBE, CSA, authors' calculation

Figure 25: Ethiopia: real interest rate on savings and lending, 2001–2020, percentages



Source: NBE, CSA, authors' calculation

There is a nascent primary capital market in which big companies, particularly banks, issue stocks. However, the lack of a secondary market means these assets are not liquid. As a result, ordinary citizens do not hold their savings in these stocks. The only option is to save in banks or hold some precious metals as a store of value.

In traditional neoclassical analysis, low interest rate reduces the incentive to save. Low saving rate in turn impacts economic growth negatively. The strong economic performance in China in the presence of financial repression suggests that this view may not necessarily be right.

It is becoming clear, however, that financial repression may come at a cost of financial risk. Channeling credit to state owned enterprises at very low interest rate with accompanying implicit and explicit guarantees leads to excess borrowing and puts the financial system at a risk of financial crisis. As a confirmation of this is the financial stress faced by the commercial bank of Ethiopia. Reflecting the weakening balance sheet of the bank due to significant non-performing loans of state-owned enterprises, the recent Home-Grown Economic reform[17] has put several initiatives that will protect the financial viability of the bank.

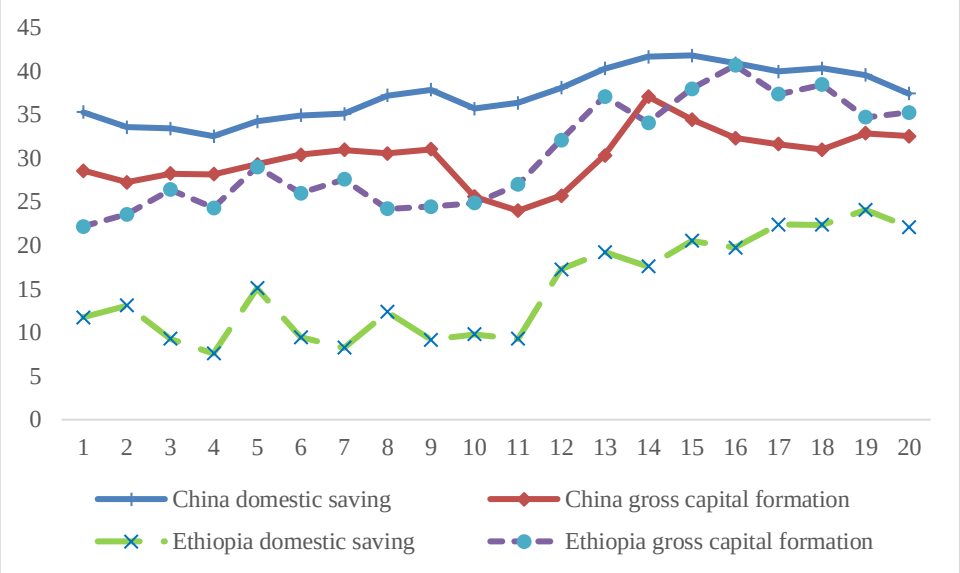
Similarly, although China has experienced strong growth with financial repression, it is becoming evident that that has led to a significant build up in financial risk in the financial

17 A Homegrown Economic Reform Agenda: A Pathway to Prosperity (https://www.pmo.gov.et/initiatives/)

system[18]. Also note that financial repression in China means a real interest rate that is close to zero unlike the significantly negative real interest in Ethiopia.

Whether due to the negative real interest rates discussed above or other structural factors, gross domestic saving as a share of GDP in Ethiopia is very low compared to China when the two countries were at similar development levels (see figure 26). On the other hand, gross capital formation is similar in the two countries. The flip side of this pattern is that Ethiopia, unlike China in its initial growth period, relies heavily on foreign savings to finance its investment. That has resulted in a build-up of foreign borrowing that puts the economy in debt distress over the last few years.

Figure 26: China and Ethiopia: gross capital formation and gross domestic savings as a share of GDP, selected periods, percentages



Note: 1 stands for 1980 in China and 2000 in Ethiopia. 20 stands for 1999 in China and 2019 in Ethiopia.

Source: WDI and NBE

4.2 Exchange Rate Management

Exchange rate management in China and Ethiopia in their early reform periods has similarities and differences. Both countries corrected their respective currencies' overvaluation when they shift away from a command-and-control economic system. For instance, when Ethiopia emerged from the communist regime and civil war, the first initiative was to devalue the Birr from 2.7 Birr/USD to 5 Birr/USD in 1992.

As shown in figure 17, the real exchange rate was depreciating throughout the 1990s. However, despite the competitive real exchange rate, growth was anemic in this period.

18 https://www.tandfonline.com/doi/full/10.1080/14631377.2020.1833554

Potential factors for the anemic growth performance include: (a) the market reforms were not supported by enabling public investments such as road and rail infrastructure. (b) It took some time to build international reputation that induces FDI flows. (c) The war with Eritrea diverted significant resource from public investment towards the war effort.

Growth picked up in the 2000s once the impact of the hindrances mentioned above subsided and the government started to make significant public investments. The significant debt relief the country received in 2006 also helps create significant fiscal space and reduced the pressure on its foreign exchange reserves.

In this period, the foreign exchange management policy of Ethiopia and China diverged significantly. First, in Ethiopia, the crawling rate of the exchange rate was kept very low in the face of surging inflations. That led to a significant appreciation of the real exchange rate.

Second, as in China, exporters are allowed to retain a certain share of their export earnings. However, there was no internal market in Ethiopia to sell their retained foreign exchange earnings. In particular, 70% of their earnings will be converted into Birr at the prevailing exchange rate after 28 days. Banks are supposed to allocate the foreign currency surrendered by exporters at the determined exchange rate based on priorities set by the government.[19]

By keeping a competitive real exchange rate and successful industrial policy, China enhanced its exports and kept sufficient international reserves. As a result, at the end of the comparison period (1999), it had unified its crawling peg rate and free-floating rate. On the other hand, in Ethiopia the peg was set in a way that led to significant appreciation of the Birr. And the industrial policy adopted did not lead to a successful increase in export earnings. The resulting limited amount of international reserves means unifying the official exchange rate, and the parallel market has been a challenge. On the contrary, the gap between the two markets kept widening over the last four years.

4.3 The Role of the Financial Sector

A well-functioning financial system is key to transform both domestic and foreign savings into investment. Although private commercial banks may play the role of saving mobilization and credit allocation of short term to medium term maturity, China's experience shows that state owned development bank(s) is important to channel savings into long term investments.

19 National Bank of Ethiopia (February 2016): Transparency in Foreign Currency Allocation and Foreign Exchange Management Directives No. FXD/45/2016 (https://nbebank.com/wp-content/uploads/pdf/directives/forex/fxd%2045.pdf).

In this regard, Ethiopia follows a similar strategy as China in terms of its banking sector. First, significant involvement of state-owned banks in the financial system. The Commercial Bank of Ethiopia (CBE) and Development of Bank of Ethiopia (DBE) combined account for 58.3% of all outstanding loans as of 2018. Second, the government mobilizes funds from other private banks and allocates it to DBE. The fund is meant to be lent to sectors deemed essential as long-term loan. This mimics the Development Bank of China's role in infrastructure investment. As of 2012, DBE allocated 70% of its loans to industry and 20% of its loans to the agriculture sector. Similarly, as of 2018, the manufacturing sector receives 58% of CBE's loan portfolio. Also, CBE purchased the largest share of corporate bonds of Ethiopian Electric Power and Ethiopian Railways Corporation.

However, excess lending to state owned enterprises, a less than robust monitoring system of the banks, and the inefficiency of the state-owned enterprises in undertaking investment projects means that the banks are facing significant risk. For instance, as of 2018, the non-performing loans (NPLs) of DBE reached 40%. The situation of CBE is not markedly different. The difference is that since most of its lending is to state owned enterprises and the loans are guaranteed by the government, the underperforming loans are not counted as NPLs.

The lesson from China is not just having state owned banks or a development bank that lends to infrastructure and other long-term projects. The lesson rather is to extend credit in a sustainable way that doesn't put the entire financial system at risk.

5 Conclusion

In discussing the economic growth in Ethiopia, it is helpful to distinguish three periods that are characterized by different policy orientations and types and magnitudes of shocks: 1974-1991, 1991-2002, and 2003-2018. The 1974-1991 period was characterized by a central planning approach to economic policy, very limited space to the private sector, civil war, and frequent droughts. As a result, GDP per capita growth was negative during this period. The end of the civil war, less frequent droughts, and market-oriented reforms were characteristic features of the 1991-2002 period. Although much growth performance was achieved during this period, per capita GDP growth was low (1.6%). Potential factors for the anemic growth performance include: (a) the market reforms were not supported by enabling public investments such as road and rail infrastructure. (b) It took some time to build international reputation that induces FDI flows. (c) The war with Eritrea diverted significant resource from public investment towards the war effort.

Since 2003, the country undertook massive public investments that is partly financed by external borrowing and domestic financial repression. Economic growth accelerated with GDP per capita growing at a rate of 7.4%. The growth was accompanied by several

positive developments. Significant improvements in human capital index, improved FDI flows, declining share of the agriculture sector, and improvement in aggregate export to GDP ratio. Despite these positive developments, the growth did not lead to the desired and sustained structural transformation of the economy.

The failure to achieve structural transformation can be seen from the following indicators. First, the change in economic composition is from agriculture to construction with the share of manufacturing sector not changing across periods. Second, the share of manufactured goods in the country's export basket has been declining for the last decade. Initial success in attracting FDI has given way to declining share of FDI as a share of GDP in recent years.

The way macroeconomic management was conducted over the last two decades also led to macroeconomic imbalances that the country is trying to solve in recent years under the auspices of its Home-Grown Economic Reform agenda20. High and volatile inflation that is not accompanied with commensurate adjustment to the crawling peg of the Birr led to overvalued real exchange rate. The overvaluation of the real exchange rate is one of the reasons for the underperformance of the manufacturing sector is an overvalued exchange rate. Also, reliance on external finance to undertake public investments and the inefficiency these projects are undertaken has led to significant debt burden. Similarly, the excessive borrowing of state-owned enterprises that is enabled by financial repression coupled with lack of proper implementation of projects has introduced significant systemic risk to the financial system of the country.

The preceding discussion and the experience of China suggests that the following are essential steps if the country is going to achieve the desired structural transformation: an environment that encourages the development of the manufacturing sector; stable and low inflation; competitive real exchange rate; less reliance on external borrowing; and increased investment efficiency.

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