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The Dynamics Behind Economic Shrinking and a Case of Recent Disappearance

Ethiopia, 1980-2019

by

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The present research aims at finding the underlying factors that contributed to the recently observed disappearance of economic shrinking in Ethiopia, defined as negative rates of GDP per capita growth. Within the framework of the *Theory of Shrinking* (Broadberry & Wallis, 2017) it sheds light on structural, technological and demographic change, the occurrence of warfare as well as institutional change over the course of four decades. The results indicate that stable growth of agricultural output, the pacification of the Ethiopian-Eritrean war and more space for civil society, opposition parties and the private sector correlate with the economy's improved resilience towards shrinking. Still, the country remains a *limited access society* that is largely based on small scale agriculture, facing reoccurring ethnic tensions and a starting demographic transition. Furthermore, the legislative period following the 2020 elections ought to prove whether the widening of the space of opposition parties, civil society groups and the private sector can sustain and expand further.

Key words: Shrinking, Resilience, Ethiopia, Institutions

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Abbreviations

ADLI	Agricultural Development Led Industrialization
AEC	Atlas of Economic Complexity
AfDB	African Development Bank
ANDM	Amhara Democratic Party
CIA	Central Intelligence Agency
ECI	Economic Complexity Index
EPRDF	Ethiopian People's Revolutionary Democratic Front
EPLF	Eritrean People's Liberation Front
GDP	Gross Domestic Product
ILO	International Labour Organization
IMF	International Monetary Fund
MoFED	Ministry of Finance and Economic Development
NIE	New Institutional Economics
NPC	National Planning Commission
OEC	Observatory of Economic Complexity
OPDO	Ormono Democratic Party
SEPDM	Southern Ethiopian People's Democratic Movement
TFP	Total Factor Productivity
TPLF	Tigray People's Liberation Front
UCDP	Uppsala Conflict Data Program
UN	United Nations
UNU-WIDER	United Nations University World Institute for Development Economics Research
V-Dem	Varieties of Democracy
WDI	World Development Indicators
WPE	Workers' Party of Ethiopia

1 Introduction

In the past decade, Ethiopia experienced a period of rapid economic growth. The country is referred to as the *African Lion* as its growth rate of per capita Gross Domestic Product (GDP) not only exceeds the Sub-Saharan average by large but has been among the highest in the region for several years (World Bank, 2020b; Seid et al., 2015). This is especially striking when looking at per capita GDP growth rates in a more long-term perspective (see Figure 1).

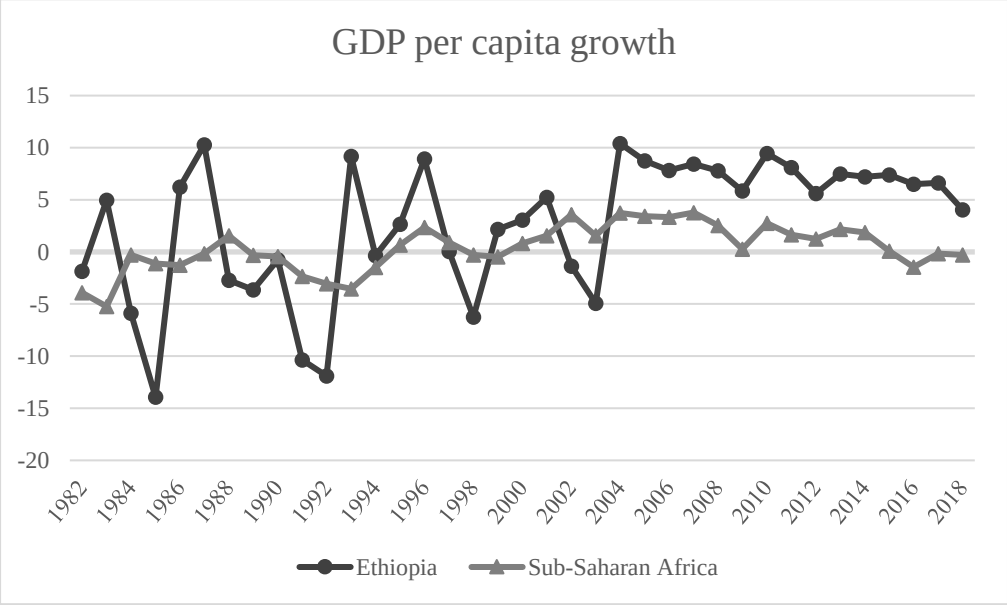

Figure 1: GDP per capita growth in Ethiopia and Sub-Saharan Africa (World Bank, 2020b)

Despite recent high growth rates, Ethiopia's per capita GDP growth has been extremely volatile and below zero in twelve out of 23 years from 1982 until 2005, while from 2005 onwards they are suddenly comparatively stable and far from negative (World Bank, 2020b). By observing these numbers one may wonder how they came about. The thesis aims to look behind the simple arithmetics of the rise and fall of per capita GDP, but rather at the underlying dynamics impacting the *size of the cake* available to the actors within an economy. It will be investigated through the lens of a recently developed approach, namely the *Theory of Shrinking* by Broadberry and Wallis (2017), aiming at exploring the features of Ethiopia's recent disappearance of economic shrinking, defined as negative per capita GDP growth rates. It is based on the assumption that reducing economic shrinking is a key factor in achieving modern economic growth. The latter manifests through aggregated changes in per capita income and results from advancements in technology and productivity in a society that adjusts its institutional capacity to make productive use of these improvements (Kuznets, 1973).

Broadberry and Wallis (2017) claim that most research on long-term economic development is falling short in considering the impact of the frequency and magnitude by which an economy is experiencing negative per capita GDP growth. They find that building up resilience towards economic shrinking was crucial to achieve long-term sustained economic advancement. Their theory elaborates on what they found to be the most important underlying factors to reduce shrinking in today's industrialized economies: structural transformation, technological change, demographic change, changing incidence of warfare and institutional change (Broadberry & Wallis, 2017). While their research is mainly concerned with the beginning of modern economic growth in Europe, North America, Australia and New Zeland, they hypothesise that building up resilience towards shrinking is still key to achieve modern economic growth and, hence initiate a process of catching-up. Support for the importance of reducing the volatility of GDP growth and making the economy resilient towards large shocks will be highlighted in the section on previous research on growth topology.

1.1 Research Problem

Interested in the factors that shaped Ethiopia's growth topology, marked by a trend-break with the disappearance of economic shrinking in the early 2000s, the thesis wants to delve deeper into the question of how Ethiopia seems to have built up resilience towards economic shrinking. Developments since the 1980s will be assessed in the framework on Broadberry and Wallis' (2017) *Theory of Shrinking* by using the method of *Analytical Narrative* linked to the single case study of Ethiopia. The research question to be answered is

What underlying factors contributed to Ethiopia's pattern of growing and shrinking of per capita GDP from 1980 until 2019?

1.2 Aim and Scope

The thesis further underlines the need for research on economic shrinking and contributes to the current academic debate around this newly established strand of theories. Furthermore, it aims to take a new angle in observing the nature of Ethiopia's economic, social and political transformation of the past decades trying to capture the multi-dimensionality of its development process. To my knowledge, this is the first academic contribution assessing Ethiopia's development process from 1980 up until recently through Broadberry and Wallis' (2017) theoretical framework. The analysis starts a few years after the Derg had overthrown the Imperial Government of Haile Selassie (Clapham, 2019). Since then the country has fundamentally changed through another violent accession of power in 1991 that entailed a shift in economic policy (Blyth & Moges, 2019). Broadberry and Wallis' (2017) *Theory of Shrinking* was developed to describe how the first industrializing countries achieved modern economic growth. They furthermore state, that the theory holds important implications for today's developing economies. Therefore, present research aims at applying their historic

framework to a developing country in the past forty years and assess the implications it holds for a contemporary case.

1.3 Outline of the Thesis

The introduction is followed by a summary of previous research on two strands of literature this thesis aims to contribute. The first concerns theories and findings on catching-up and convergence while the latter deals with previous research on the topology of economic growth, examining underlying factors of volatile growth patterns with sudden halts and accelerations. The following section goes into more detail about the *Theory of Shrinking* developed by Broadberry and Wallis (2017) as it provides the main foundation of the analysis. Sections on data, as well as the analytical narrative method follow. The subsequent empirical analysis is separated into five sections: Ethiopia's overall growth performance, the three proximate factors impacting the resilience towards shrinking, namely structural and technological change, demographic change, and changing incidences of warfare, and the ultimate factor of institutional change. The analysis ends with a discussion of the main findings, followed by a conclusion. The discussion incorporates an assessment of explanatory power of the theory and how it might be extended in the future to meet the reality of a developing economy in the first half of the 21st century.

2 Previous Research

This paper relates and aims to mainly contribute to the two following branches in academic literature: Firstly, literature on catching-up and convergence following Broadberry and Wallis (2017) research which argues that building up resilience towards economic shrinking was key in order to introduce sustainable modern growth and potentially successfully converge with today's developed economies. Secondly, it aims to add understanding to literature on growth trends and patterns, how economic growth is stabilized, shocks that put halts on it and foundations that make it sustain.

2.1 Catching-Up and Convergence

Finding the underlying sources for income differences among countries is a concern lying at the roots of economic science (Smith, 1776). Since the early 19th century at the latest industrialized countries have grown faster than developing countries, resulting in a first wave of diverging levels of per capita GDP. The experience of East Asian Economies proved that catching up with the West is possible (Maddison, 2001). Overall, many countries have demonstrated to be able to achieve high levels of growth in the medium-run and there is a large strand of literature aiming to explain the composition and roots of long-term economic growth leading to a gradual convergence with high-income countries (Hausmann et al., 2005). This chapter is concerned with a widely accepted neoclassical explanation, as well as relevant literature of New Institutional Economics (NIE), as the core section of the analysis is based on an institutional approach.

One of the most prominent neoclassical growth models is the Solow-Swan Model. It disentangles growth into the accumulation of the production factors labour and capital. The model assumes that the evolution of savings, population growth and diminishing returns to capital will balance economies towards a steady state whereas technological advances allow for its upward movement (Solow, 1956; Swan, 1956). Despite originating as a model for the analysis of industrialized economies, the Solow-Swan model has largely been applied to the developing world (Perkins et al., 2013: 103). Criticism on neoclassic growth models concerns the exogenous nature of productivity growth, as technological advancement is hypothesized as something that automatically evolves. Underlining the importance of technological advances, Klenow and Rodríguez-Clare (1997) have found that differences in Total Factor Productivity (TFP) are the main factor accounting for income differences among economies. Endogenous growth models have integrated technological change into neoclassical growth models and therefore extended the knowledge on the impact of technological progress on economic growth (Klenow & Rodríguez-Clare, 1997; Romer, 1986; Lucas, 1988).

The New Institutional Economics (NIE) claim that neoclassical growth models only provide insight into the proximate causes of economic growth describing the accumulation of different factors, but fall short in considering the ultimate factor behind income differences among countries: institutions (North & Thomas, 1973). North (1990: 3) defines institutions as *"the humanly devised constraints that shape human interaction. (…) In consequence they structure incentives in human exchange, whether political, social or economic."* Formal, as well as informal institutions are analysed according to their ability to provide a basis for sustained long-term economic growth and convergence of incomes (Acemoglu et al., 2004; Engerman & Sokoloff, 2003; NWW, 2009). NIEs are incorporating institutions as an endogenous variable to the economic system, shaped by economic history. Furthermore, the interconnection between economic and political institutions is emphasized by many authors of NIE (Acemoglu et al., 2004; Acemoglu & Robinson, 2012; Engerman & Sokoloff, 2003; Greif & Laitin, 2004; NWW, 2009).

Institutions are a concept seemingly hard to grasp, as they can take on different forms with similar functions, depending on the circumstances. In this light, Rodrik (2008) stresses the importance of local knowledge and calls for considering second-best institutions adapted to context-specific circumstances, rather than blueprints of best-practice institutions modeled after institutions that work well in industrialized economies. North, Weingast and Wallis (NWW, 2009) develop a framework focusing on the inclusiveness of social orders in the double balance of economic and political institutions. In line with Rodrik (2008) they believe that institutions need to tackle issues in a context-specific way and that the solution to the problems of limited access orders lies within it (NWW, 2009; Delanty, 2012). Their theory of *Violence and Social Order* will be considered in the theory section of institutional change. Without claiming to capture all sources of economic development, NIE provide a useful alternative approach to neoclassical theory's shortfall in explaining the fundamental sources of income differences among countries and unsteady growth topologies (Acemoglu & Robinson, 2015; Rodrik et al., 2002).

Some main criticism of NIE concerns disagreement over the interpretation of historical events and the weight they should be given. Other researchers demand more nuanced approaches such as closely observing causal relationships and incorporating a larger variety of factors like geographic conditions and cultural norms (Diamond, 2012; Fukuyama, 2012; Hodgson, 2017; Sachs, 2003).

2.2 Topology of Economic Growth

In aiming to explain how countries achieved and sustained prosperity, most literature in economics and economic history engage in finding ways how economies can initiate and sustain processes of growth. For a long time, academic literature has focused on average growth rates, rather than the growth topology and the determinants of accelerations and growth collapses, as well as their disappearance. This section will consider some selected studies focusing on factors guiding variations in growth topologies, with special consideration

to sudden halts and steep rises and establish that this seems to be especially important in the context of a developing country.

Easterly et al. (1993) were among the first who analysed unstable long-term growth rates and the role that random shocks, country characteristics and policies play in the long-term perspective. Their findings suggest that growth topologies vary over decades, despite country characteristics and policies remaining relatively constant. They argue that random shocks, especially in terms of trade, largely impact economies' long-term growth patterns.

Rodrik (1999) provides an addition to Easterly et al.'s (1993) perspective, in systematically analysing how shocks and their consequences are related to latent social conflicts and institutions of conflict management. The paper concludes with underlining the importance of establishing institutions for conflict management, especially as increasing integration into the world market brings a growing potential of shocks and therefore the need of building up resilience.

Pritchett (2000) categorizes countries according to their growth patterns, in contrast to average growth performance. By applying various measures, the paper finds that per capita GDP is much more volatile in developing countries compared to industrialized economies and that e.g. in the Sub-Saharan African region countries display corresponding patterns. He suggests more intensive research on what initiates or halts episodes of growth under which economic conditions and policy environment.

Raddatz (2007) similarly finds that low-income countries display much larger volatility with frequently reoccurring negative shocks, compared to high-income economies. In contrast to Easterly et al. (1993), his analysis shows that external shocks (terms-of-trade shocks, natural disasters, changes in the state of the international economy and international interest rates, as well as fluctuations in aid flows) in sum only make up a marginal share of 11 % among the causes of volatile GDP topographies in low-income countries. In line with Acemoglu et al. (2003) and Ahmed (2003), he accounts lacking resilience to shocks to internal factors. Those factors are on the one hand concerning macroeconomic stability, while in line with Rodrik (1999) the impact of political instability and violent conflicts is assumed to be substantial (Raddatz, 2007).

Hausmann et al. (2005; 2006) research on incidences of episodes of rapid output growth and growth collapses to find out what initiates them. Instead of looking at overall volatility like most previous research, they analyse accelerations and collapses separately. Their findings suggest that while overall accelerations of growth are not easily predicted, economic reform and regime change are the most significant predictors, the latter predicting sustained episodes of growth. Being more frequent and long-lasting in developing countries, growth collapses are found to correlate changes in the export patterns, wars and political transition.

In line with Prichett (2000) and Raddatz (2007), Jones and Olken (2008) find that exceptional growth rates and subsequent collapses frequently occur in countries of all income categories, but high-income countries. Similar to Hausmann et al. (2005; 2006) they discover that factors triggering initiations of accelerations and collapses are divergent. The main driver of collapses seems to be declining investment and price stability. Remarkable growth

performances are in the short run often achieved by the expansion of international trade. That interestingly diverges from the findings of Hausmann et al. (2006), who connect changing trade regimes to growth collapses rather than growth accelerations. However, Jones and Olken (2008) conclude that periods of long-term sustained growth are potentially impacted by a multitude of other underlying factors.

Berg et al. (2012) research on the underlying factors for the duration of growth spells. Their analysis shows the duration to be positively correlated with the degree of equality of the income distribution, democratic institutions, export orientation and macroeconomic stability.

The IMF (2014) policy paper on sustaining long-run growth and macroeconomic stability in low-income countries finds that growing diversification of an economy's export basket and domestic production correlates with reduced volatility in GDP growth and macroeconomic stabilization. Measures supporting diversification are investment in infrastructure, trade networks, human capital, as well as support for financial deepening and the relaxation of trade barriers.

Cuberes and Jerzmanowski (2009) connect growth volatility to democracy. They support evidence by Rodrik (2000) who suggests that per capita GDP growth is less volatile in democratic countries but suggest to focus more on medium-term changes in growth to account for trends rather than random shocks, inspired by Hausmann et al. (2005). Cuberes and Jerzmanowski (2009: 1295) find that less democratic countries show a pattern significantly more frequent in which *periods of exceptionally high growth are (…) followed by periods of exceptionally low growth and vice versa*. They furthermore develop a model that incorporates democracy and diversity of economic activity, suggesting that non-democracies are likely to have high entry barriers for new firms, display greater sectoral concentration and more volatile growth patterns. They suggest that diversification of economic activity stabilizes the economy and adds to resilience towards collapses, while at the same time it reduces the likelihood of exceptionally high growth rates (Cuberes & Jerzmanowski, 2009).

Broadberry and Wallis (2017) claim that research is lacking systematic analysis of economic shrinking and what impacts on its disappearance. In line with most of the above-stated authors, they find that, since the 1950s, rates of per capita GDP growth and shrinking have been high and volatile in most countries, and still are in developing countries. Their research on historical data shows that today's industrialized economies managed to reduce the frequency and rate by which their economy's per capita GDP shrank. Interestingly, their average growth rate has rather decreased over the course of bettering long-run economic performance. Furthermore, Broadberry and Gardner (2019) have found that African economies, despite high growth performances, evidence a high frequency and magnitude of economic shrinking that impeded long-term advancements. In this light, Broadberry and Wallis (2017) theory will be described in greater detail in the following chapter, providing the framework for the analysis.

Andersson (2018) applies Abramovitz (1986) social capability framework to more recent data from Asian, Latin Amerian and Sub-Saharan African countries in order to assess the relevance of economic shrinking. He supports Broadberry and Wallis in concluding that

shrinking and building up resilience against it, seems to have a substantial impact on a long-term growth trajectory. Between the two theories considering shrinking, the decision fell on Broadberry and Wallis' *Theory of Shrinking* for the theoretical framework which will be applied to the case of Ethiopia from the 1980s until today. The main reason for this decision is simply that Broadberry and Wallis explicitly study the impact of warfare, which seems especially relevant for Ethiopia in the regarded time frame.

3 Theoretical Approach

As mentioned above, the paper will base its analysis on Broadberry and Wallis' (2017) framework of the *Theory of Shrinking* which will subsequently be explained in greater detail. Their main findings state that per capita GDP in today's industrialized economies was highly volatile before approximately 1950. Their analysis results that periods of high growth rates were interrupted by high rates of negative growth; in periods with low growth rates on average shrinking rates also appeared at a lower magnitude. Furthermore, their findings suggest that long-run economic performance improved substantially in Europe and the New World since 1950 due to a reduced contribution of shrinking (in frequency as well as magnitude), rather than an increased impact of growth. Average growth rates have rather declined, only their frequency has increased due to a decrease in shrinking years (Broadberry & Wallis, 2017). After establishing the key role of economic shrinking in a long-term sustained growth performance, Broadberry and Wallis develop a framework for the underlying factors impacting on the resilience towards shrinking. Their theory combines proximate factors impacting on factor accumulation within the economy, namely, structural and technological change, demographic change, as well as changing incidence of warfare. Furthermore, their theory incorporates an important framework of NIE, institutional change being the fundamental source behind a stable growth topography.

3.1 Structural and Technological Change

Broadberry and Wallis suggest studying different sectors' growth topology and changes in their contribution to the overall output. They argue that declines in the contribution of especially volatile sectors, such as agriculture and natural resources, are expected to positively impact the disappearance of the volatility of aggregate per capita output. This connects to classical theory on structural transformation, which *refers to the systematic changes in sector proportions as economies grow* (Perkins et al., 2013: 587) and potentially stop shrinking. As opposed to Broadberry and Wallis, this analysis does not separate the impact of structural transformation and technological change on the decreasing trend in economic shrinking. Both developments are closely interconnected, as structural transformation in developing countries is found to start with increasing productivity in the prominent agricultural sector, which is subsequently releasing capacity towards the more productive manufacturing and services sectors (Lewis, 1954; Kuznets, 1973). Structural change is therefore rather an outcome of increasing productivity. Broadberry and Wallis' findings show that it was foremost productivity growth through technological advancements that correlate with the reduced shrinking of per capita GDP. To check on the assumption that growth rates and frequencies increase while shrinking declines as productivity advances, they consider Total Factor Productivity (TFP) trends.

3.2 Demographic Change

The demographic composition within an economy largely impacts the distribution of available capital and the structure of the labour force and therefore needs to be considered in a process of long-term development. Broadberry and Wallis refer to Malthus' (1798) framework of pre-industrial societies in analysing the impact of demographic change on the development of per capita GDP. According to him, short-run growth of per capita GDP stems from population decline (through increased mortality or declining fertility) or enlargement of land available for production, this is true for economic shrinking vice versa. In the long run, Malthus (1798) assumes GPD growth to entailing population growth, which brings about a gradual reduction of per capita GDP. European countries were able to escape this Malthusian trap with rising or at least stagnating living standards, e.g. 18th century England. Broadberry and Wallis (2017) attribute a certain role of escaping the Malthusian trap to European countries' resilience towards shrinking and long-term growth performance. However, dynamics of demographic change are fundamentally different in today's developing countries, like Ethiopia. Technological change is no longer stagnant and advanced technology is ready to be imported from developed and emerging economies (Galor & Weil, 2000). The precise nature of demographic change's impact on shrinking remains hotly debated and uncertain (Bloom et al., 2003; Broadberry & Wallis, 2017; Galor & Weil, 2000). However, the implications of demographic trend breaks and shocks will be considered.

3.3 Changing Incidence of Warfare

Broadberry and Wallis (2017) find increasing frequency and magnitude in the rate of economic shrinking while a country is at war. Occurrence of warfare and the pacification of conflicts are regarded as shocks to the economy. Clark (1916) calls war a *decapitalization on vast scale,* destabilizing the economy through extensive destruction of physical and human capital and therefore leads to increased rates and frequencies of shrinking. However, while they observe short- and medium-term increases in the frequency and magnitude of shrinking followed by increased growth rates after pacification, the effect on long-term economic performance is found to be limited (Broadberry & Harrison, 2008; Broadberry & Wallis, 2017).

3.4 Institutional Change

Institutional change, according to Broadberry and Wallis (2017) is the key to prevent an economy from reoccurring high rates of shrinking. They mainly ground their theory regarding institutions on the work of D. North, claiming that institutional change is essential in achieving sustained long-term growth, and consider the work resulting from a collaboration with J. Wallis and B. Weingast that takes into consideration the reduction of shrinking. North,

Wallis and Weingast (2009) establish a framework incorporating the natural state or limited access order in which a limited number of influential individuals control available resources. The natural state has been the globally dominant order in most of history. Rules in the natural state are what they refer to as identity rules, defined as *rules whose form and enforcement differ according to the organizational identity of the individuals to whom the rule applies* (Broadberry & Wallis, 2017: 23). Those rules ensure the distribution of rents among elites. The incentive to follow these rules is the potential reduction of rents at the occurrence of conflict. Identity rules are informal and tied to organizational identity, but not legally recognized. Therefore, they depend on the relative power of the organization they are connected to, which is unforeseeable over time. NWW (2009) furthermore distinguish between fragile, basic and mature natural states, which will be elaborated further in the analysis. The framework argues, that in order to reduce shrinking a state must shift from a natural state with identity rules towards an open access order with impersonal rules *that treat everyone the same* (Broadberry & Wallis, 2017: 23). The open access order allows for a larger number of complex organizations that foster economic and political competition. In a natural state where rents are mainly controlled by elites, the degree of specialization and division of labour are conditional to the coordination within society as elite networks dominating commercial, economic, political and social spheres. Furthermore, identity rule societies are characterized by fragility with changes in elite identities leading to disruption of economic activity and increasing vulnerability towards economic shrinking, while relations are still credible after a shift in power in open access orders business (Broadberry & Wallis, 2017). An important feature of their theory states that the solution to the problems of the limited access order lies within it (Delanty, 2012). Their framework hypothesizes on the transition to an open access order has to start within the logic of the natural state. The three doorstep conditions potentially paving the way to an open access order are (1) establishing rule of law for elites, (2) allowing impersonal relationships within them, as well as (3) consolidating political control of the military (NWW, 2009).

Proximate and ultimate factors are not to be regarded isolated, but interrelated in a complex way. As mentioned above, an open access society dominated by impersonal rules allows for more diversification of economic activity and a larger number of complex organizations. Furthermore, shifts in political power affect economic activity to a much lesser extent in an open access order. Following increased stability and security allows individuals to refrain from their dependence on agriculture, providing for food during crisis (Solar, 1995). The same factors impact on technological innovations, enabling the coordination of large groups of individuals experimenting with innovations (Kahn, 2005). Potentially, technological progress sets a demographic transition with increasing demand for human capital in motion (Galor, 2005). At last, as the legal system and rule enforcement shift towards impersonal rules it provides new mechanisms for conflict resolution restraining from violent conflict (Rodrik, 1999; Pinker, 2011). However, NWW's theory on institutional change is strongly focused on elites and lacks consideration of bottom-up movements (Delanty, 2012). Shortcomings of Broadberry and Wallis (2017) *Theory of Shrinking* in the light of a modern developing country will be considered in the discussion.

4 Data

Following suit of Broadberry and Wallis (2017) the thesis will base its analysis on quantitative data and additionally use qualitative sources like Ethiopia's development plans, NGO reports and findings in academic literature to contextualise the results. This aims to ensure a broader picture of the multidimensional dynamics impacting economic shrinking and resilience against it. The data used is briefly stated below and reflected in some cases. This was not done for all cases, due to the limited scope of the work. Still, the data is analysed with the awareness that it might include mismeasurements. Nega (2010) for instance, puts doubt on the reliability of the data of macroeconomic variables of which the only source is the Ethiopian Ministry of Finance and Economic Development (MoFED) which relies on raw data of the Central Statistical Authority. The data provided by the MoFED is used e.g. in the World Bank's World Development Indicators (WDI). However, even though it might not be without flaws it is the most reliable source available.

The first section of the analysis considers Ethiopia's growth topology and uses data of GDP per capita and its growth provided by the World Bank (2020b) WDI. Structural and technological change will similarly be analysed with WDI data, complemented by data on TFP growth provided by The Conference Board. The diversification of exports will be considered through the Economic Complexity Index (ECI) that is compiled by the Observatory for Economic Complexity (OEC). Data on demographic change is obtained from the UN Population Fund and the WDI. The section on incidences of warfare bases its analysis on data gathered and assembled by the Uppsala Conflict Data Program (UCDP). Collecting data in times of war poses many difficulties. The UCDP is used as a comparatively reliable and widely internationally used data set on armed conflicts (UCDP, 2019). Inclusiveness of the political and economic order provides a tricky case for measuring. The section on institutional change considers a variety of data to measure institutions, as well as their economic and social outcomes. Woodruff describes the Polity IV measure as a good institutional measure as it, in contrast to various other measures, captures formal and informal institutions. Such measures are found to correlate with economic outcomes. The Polity IV measure combines the database's measures for autocracy and democracy. The measure's definition of autocracy and democracy is largely in line with the concept of the natural state and the open access order by NWW (2009) (Marshall et al., 2019: 14-15). The Varieties of Democracy (V-Dem) dataset published by the University of Gothenburg provides indices on rule of law and freedom of association that, similarly to the Polity IV database, incorporate information on formal and informal rules. Surely, ready-made indices include potential biases in data collection and weighting of different factors. However, the data is selected with great care and believed to display trends of institutional change. Implications on changes in the economic and social structure are measured by gross capital formation in the private sector with data from the African Development Bank (AfDB), inequality data by UNU-WIDER and government expenditure on education and health by the WDI.

5 Methods

The method used to tackle the research question *What underlying factors contributed to Ethiopia's resilience towards economic shrinking from 1984 until 2019?* is the Analytical Narrative method using the framework of Broadberry and Wallis' (2017) *Theory of Shrinking*. The data described in the previous section is examined in comparative statistics, to analyse whether it follows the trend predicted by the theory.

The analytical narrative method is based on a case study approach and widely used in the field of economic history, political economy and new institutional economics to conduct over time comparison (Weingast, 2000; Alston, 2008: 104). Analytical narrative combines the use of a theoretical framework backed up by historical qualitative and quantitative evidence (Alston, 2008: 103). Compared to other case studies, the method uses comparative statistics and off-the-path-behaviour to reveal processes and mechanisms which might otherwise go undetected (Levi & Weingast, 2016: 18). Case studies enable the analyst to isolate the impact of a theoretical concept in a more detailed and potentially more compelling manner (Alston, 2008: 103). In contrast to Broadberry and Wallis (2017), this thesis conducts a single case study approach including a comparison of proximate and ultimate factors over time, rather than a comparative analysis between two or more economies. It aims to complement the findings of Broadberry and Wallis (2017) cross-country analysis and add to the understanding of the theory in the context of a developing country (Rodrik, 2003: 10). Furthermore, this thesis has drawn inspiration from Lange (2019) who applied a similar method to examine reoccurring shrinking patterns in Nigeria.

Justifications for choosing a single case study are to have found *a critical, unusual, common, revelatory or longitudinal case* (Yin, 2014: 51). In the regarded time frame, Ethiopia presents a critical case. This is due to the observation of very volatile per capita GDP with eleven years of economic shrinking between 1984 and 2005, while shrinking has not occurred anymore since then. At the same time, viewed in the Sub-Saharan African context, Ethiopia can be regarded as an unusual case, as its GDP per capita rates are rather extreme compared to the region's average, as observed in Figure 1. Finally, it is a longitudinal case observing a long-term trend spanning almost four decades.

The *Theory of Shrinking* provides a set of circumstances within which its propositions are believed to be true. The analytical narrative is testing the multiple implications of theory to delve deeper into complex developments of reality (Levi & Weingast, 2016; Bates et al., 2000). Broadberry and Wallis' (2017) *Theory of Shrinking* provides us with several propositions that are stated below and will be tested in the analysis:

Proposition 1: Structural transformation and growing Total Factor Productivity (TFP) correlate with improved resilience towards economic shrinking.

Proposition 2: Demographic change correlates with shifts in per capita GDP growth.

Proposition 3: The absence of warfare correlates with improved resilience towards economic shrinking.

Proposition 4: Institutional change towards an open access society dominated by impersonal rule correlates with improved resilience towards economic shrinking.

6 Empirical Analysis

6.1 Ethiopia's overall Growth Performance

As a starting point of the analysis, the following section intends to closely examine the evolvement Ethiopia's topology of economic growth. Figure 2 shows that volatile growth leads from the starting point in 1981 up to 1991, where it fell to its lowest point. The following decade was marked by slow and unsteady growth. However, since 2003 Ethiopia displays steep growth of per capita GDP, which almost tripled within 15 years.

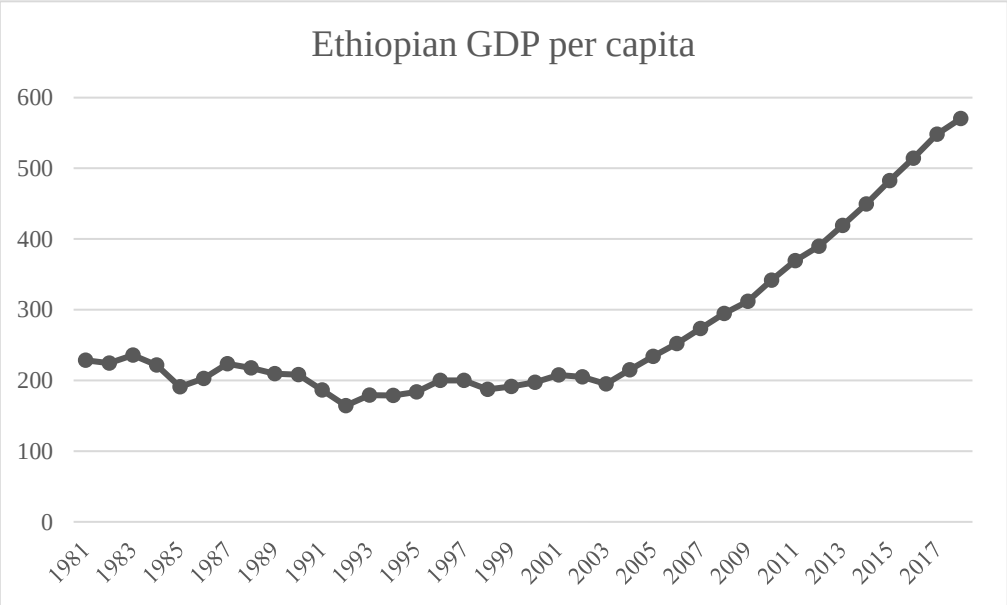

Figure 2: Ethiopian GDP per capita in constant 2010 US$ (World Bank, 2020b)

Before disentangling Ethiopia's growth performance one ought to mention that despite its impressive growth performance of the past 15 years, Ethiopia remains poor compared to the Sub-Saharan African average. While the average Sub-Saharan African individual earned a per capita income of 1,590$US in 2018, the average Ethiopian earned less than half with 770$US (World Bank, 2020b). Therefore, Ethiopia is categorized by the World Bank as a low-income country (World Bank, 2020a).

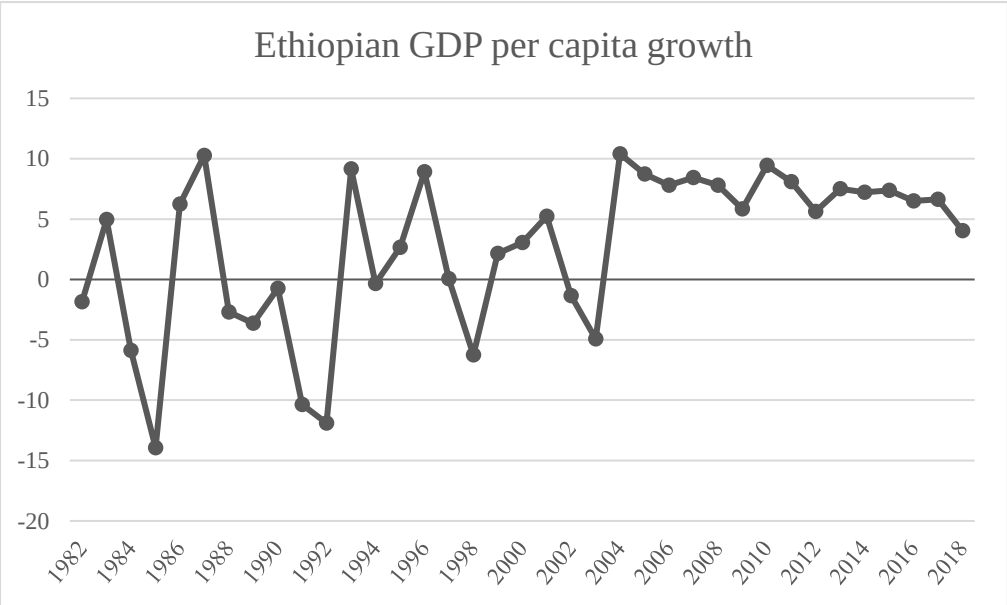

Figure 3: Ethiopian GDP per capita growth (World Bank, 2020b)

Figure 3 presents Ethiopia's growth rate, which was very volatile for most of the regarded period showcasing twelve years of shrinking up until 2004. Since then overall output in per capita terms is growing at high and positive rates. The analysis in Table 1 shows a strong contribution to economic shrinking in the 1980s and 90s. The negative effect of shrinking is balanced out by a high average growing rate to some extent. Still, the overall contribution of shrinking exceeds the contribution of growing. The same is true for the 1990s, where there is an equal amount of growing years compared to shrinking years, but shrinking rates are higher on average. The situation changed in the 2000s, where the years with positive growth rates outnumber the years marked by slumps. Furthermore, the growth rates are on average more than double as high as the shrinking rates in the first decade of the 21st century. Following the trend towards a continuous reduction in the contribution of shrinking, the 2010s are characterised by its disappearance. Moreover, the contribution of growing is the highest of the whole regarded period.

Table 1: Ethiopia's contribution of growing and shrinking (World Bank, 2020b)

	Frequency of shrinking years	**Average shrinking rate**	**Frequency of growing years**	**Average growing rate**	**Contribution of shrinking**	**Contribution of growing**	**Economic performance (shrinking*growing)**
1980s[1]	0.63	-5.6	0.38	7.16	-3.5	2.69	-0.81
1990s	0.5	-5.92	0.5	4.59	-2.96	2.3	-0.66
2000s	0.2	-3.13	0.8	7.16	-0.63	5.73	5.10
2010s	0	0	1	6.94	0	6.94	6.94
Average 1982-2018	0.32	-5.32	0.68	6.57	-1.73	4.44	2.71

Broadberry and Wallis (2017) similarly found reduced frequency and magnitude of shrinking, as well as growth rates exceeding shrinking rates in Britain's transition to modern economic growth in the 18th century. The following sections aim to assess the impact of proximate and ultimate factors on the gradual decline of economic shrinking in Ethiopia observed above. It furthermore aims, to see whether recently observed patterns could indicate the start of a deep rooting transformation with the potential of paving the way towards modern economic growth. However, it ought to be underlined that the declining trend in shrinking is observed only very recently, one cannot yet speak of a long-term trend[2]. Furthermore, the reality of a developing country in the 21st century is a very different one compared to industrializing Europe. Still, the framework of Broadberry and Wallis is believed to provide explanatory power for capturing recently occurred changes in Ethiopia's economic development and indications on their potential to sustain.

[1] The authos calculated the contributions by multiplying the frequency and magnitude of growing/shrinking in each deacade. The averages over the 1980s and 2010s are taken over seven or eight years respectively (1982-1989 and 2010-2018) due to lacking data. The same applies to Table 2 on the following page. The row 1982-2018 calculates the annual averages over the whole regarded period.

[2] Broadberry and Wallis (2017) speak of a long-term trend as a period of at least 50 years.

6.2 Structural and Technological Change

The analysis of the following section is based on *Proposition 1* introduced in the method chapter: *Structural transformation and growing Total Factor Productivity (TFP) correlate with improved resilience towards economic shrinking.* The data analysis of the sectoral development will be complemented by a summary of major objectives and shifts in the governments' strategies for economic development. Furthermore, the analysis breaks down the contribution of shrinking and growing on a sectoral level. The evolution of productivity will be analysed on an aggregate level.

Taking sectoral contributions of growing and shrinking into account, Table 2 shows that the agricultural sector was most heavily affected by shrinking in the 1980s. While it simultaneously made up about half of the total output (Table 3), it potentially had a large effect on shrinking of the overall per capita GDP. The 1980s were dominated by several severe droughts and misguided policies of the Derg regime. The communist regime had nationalized all rural lands in 1975, grouped peasants into producer cooperatives and additionally established large-scale farming (Taffesse, 2019; Manyazewal & Shiferaw, 2019; Hansson, 1995; Alemayehu, 2001: 29). The quotas on agricultural production and fixed prices reduced incentives for productivity growth, commercial farming failed due to mismanagement, underdeveloped infrastructure impeded interregional trade and support of remote areas affected by droughts (Manyazewal & Shiferaw, 2019). The small manufacturing sector comprised of poorly performing state-owned enterprises predominantly producing food and textiles (Manyazewal & Shiferaw, 2019). According to Hansson (1995), growth in services in the Derg period can largely be ascribed to constantly growing defense expenditure. While service's share in GDP was about a third, manufacturing contributed less than 5 % to the overall GDP. Both sectors grew less and shrank substantially less in comparison to the agricultural sector.

Table 2: Sectoral contributions of growing and shrinking (World Bank, 2020b)

	Agriculture		**Manufacturing**		**Service**	
	Growing	Shrinking	Growing	Shrinking	Growing	Shrinking
1980s	6.11	-4.69	3.92	-0.61	4.74	-0.07
1990s	4.06	-1.38	6.54	-5.28	7.08	-3.62
2000s	7.74	-1.24	7.19	0	12.33	0
2010s	6.55	0	16.89	0	12.53	0

The shift in power from the Derg regime to the Ethiopian People's Revolutionary Democratic Front (EPRDF) in 1991 entailed substantial changes in the economic system (Alemayehu, 2001). The reforms aimed at recovery from mismanagement, conflict and famine and initially focused on macroeconomic stability, private sector participation and infrastructure. Furthermore, the Agricultural Development Led Industrialization (ADLI) strategy was introduced in 1993. It serves as a basis for five-year development plans and conveys the overall government strategy of raising agricultural productivity and initiate structural transformation gradually resulting in a process of industrialization (MoFED, 2006; 2010; NPC, 2016).

The overall share of agriculture increased slightly in the 1990s and, in absolute terms, the sector was shrinking substantially less than in the previous decade, despite reoccurring droughts (Alemayehu, 2001). The service sector's more severe shrinking of 3.6 % must have additionally impacted the overall economy contribution of shrinking of almost 3 %. Manufacturing was shrinking the most but made up less than 5 % of GDP at that time.

Table 3: Sectoral shares of value added as percent of GDP (World Bank, 2020b)

	Agriculture	Manufacturing	Service
1980s	50.65 %	4.58 %	34.05 %
1990s	53.63 %	4.76 %	31.78 %
2000s	41.87 %	5.03 %	39.37 %
2010s	42.82 %	5.11 %	43.85 %

The 2000s mark a further step towards reduced shrinking with agriculture being the only sector shrinking at a marginal level. Furthermore, the sectoral shares start shifting away from agriculture, but towards service rather than manufacturing counter the intentions of government policy. This trend further continues in the following decade in which, in line with overall per capita GDP, none of the sectors is shrinking. While service was growing to the largest extent in the 2000s, manufacturing took over in the 2010s with a growth rate averaging almost 17 %. Still, it contributes to GDP only at a marginal share. In terms of value added

share in GDP, the service sector has recently taken over the agricultural sector. However, agriculture remains the largest employer as shown in Figure 4 below[3].

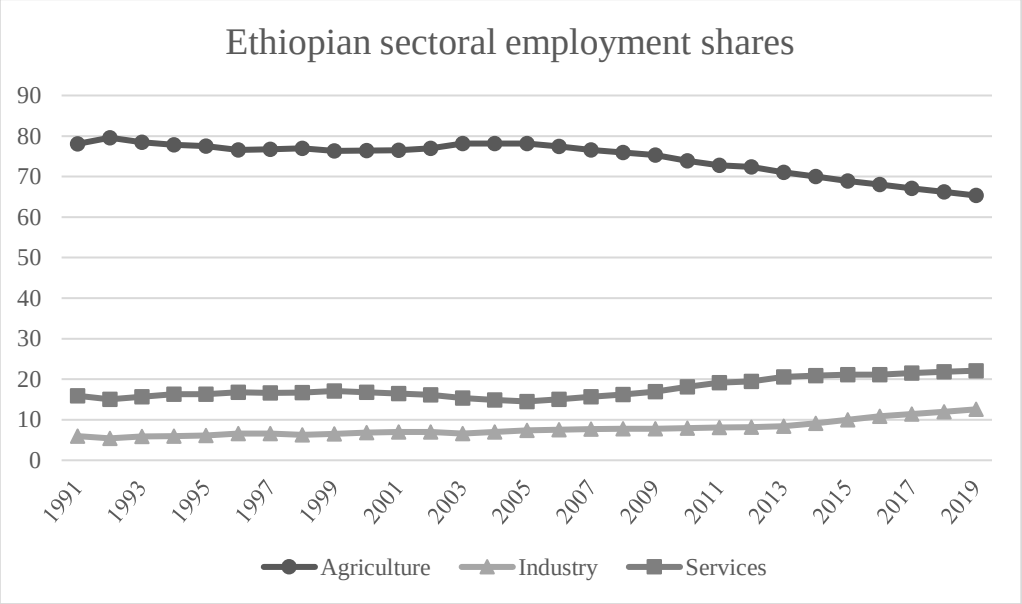

Figure 4: Ethiopian sectoral employment shares (World Bank, 2020b)

[3] As the World Bank's World Development Indicators do not provide employment shares for manufacturing, industry's shares were included instead. Comparison must be treated with care, as industry includes manufacturing, electricity, water, gas and construction, the latter adding the major contribution to overall industrial activity (NPC, 2016; World Bank, 2020).

The large contribution of agriculture to the growth topology of GDP is confirmed when plotting GDP per capita growth and agricultural value added growth against each other. Alemayehu (2001) had shown that GDP growth rates closely follow growth rates of agriculture and argues that the post-Derg Ethiopian economy of the 1990s was largely dependent on rain-fed agriculture. Figure 5 suggests that this close connection remains until today.

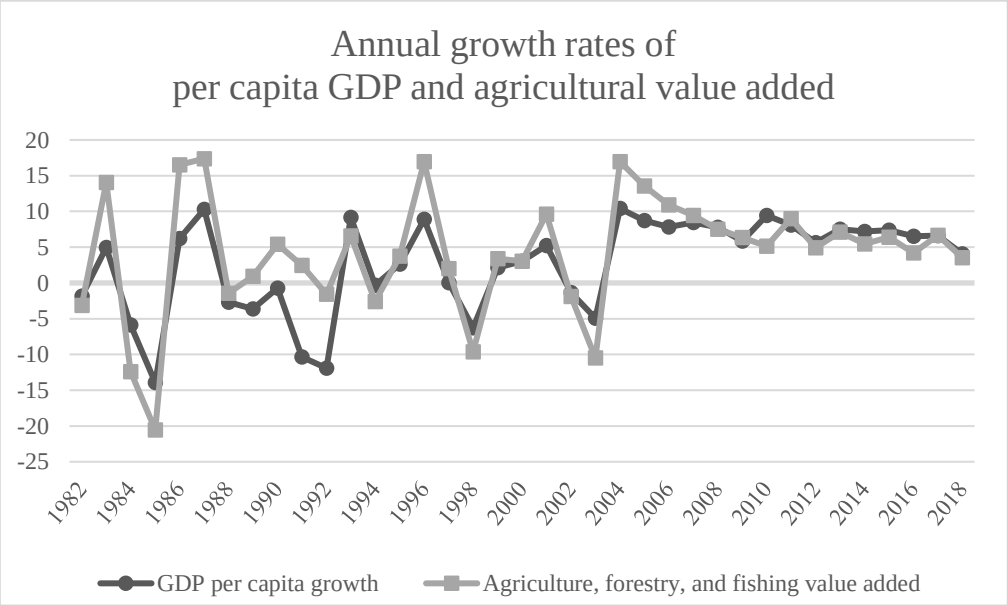

Figure 5: Growth rates of GDP per capita and agricultural value added (World Bank, 2020b)

While this is not considered in Broadberry and Wallis' (2017) analysis, Hausmann et al. (2007) and the IMF (2014) suggest that increased diversification of the export basket correlates with a reduction in growth collapses. The Observatory for Economic Complexity created an index on economic complexity (ECI) based on the diversification of their exports and the quality of exported goods. Figure 6 exemplifies that the Ethiopian export sector is of decreasing complexity. A correlation of reduced volatility with increasing complexity of the Ethiopian export sector can therefore not be confirmed. The ECI is not taking service exports which recently overtook agricultural goods as the country's major exports into account. However, the *Atlas of Economic Complexity* curated by the Harvard growth laboratory's rating of economic complexity shows a low diversification in the service sector and puts Ethiopia on a correspondingly low place on the ECI (AEC, 2020; OEC, 2020). Despite the government's ambitions to model the export-led industrialization of the East Asian economies, the export performance of the light manufacturing sector remains limited, among others due to insufficient linkages to agriculture and service, partly accounting for lacking diversification of exports (Manyazewal & Shiferaw, 2019; Bezawaga et al., 2018; NPC, 2016).

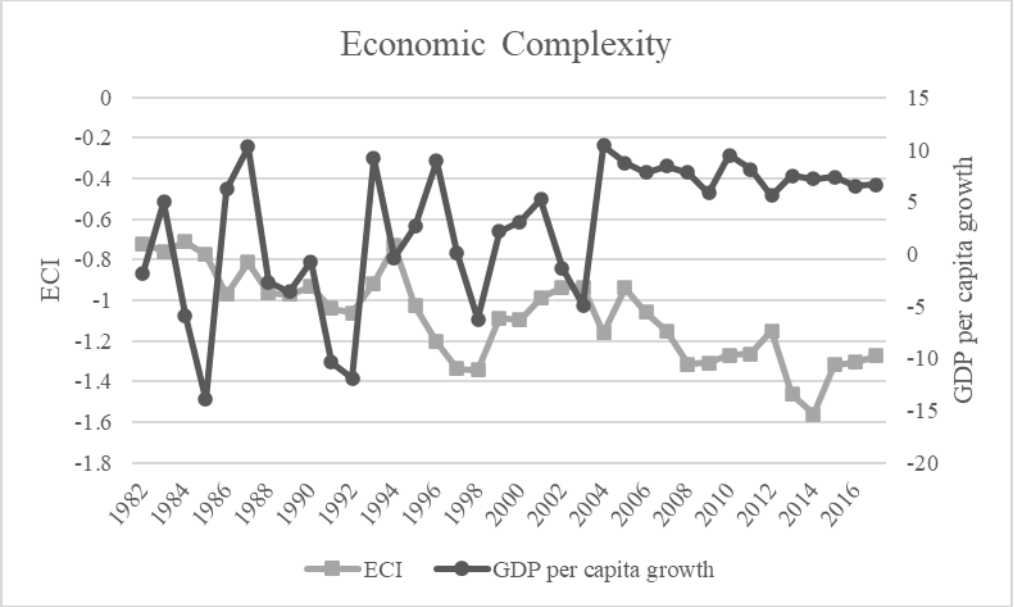

Figure 6: Economic Complexity (OEC, 2020) and GDP per capita growth (World Bank, 2020b)

Broadberry and Wallis (2017) found increasing productivity to be positively impacting economy's resilience towards shrinking. The Conference Board provides data on Ethiopia's TFP growth from 1990 onward. Furthermore, literature regarding the 1980s states that the period was marked by slow but steady growth of productivity in agriculture which was attributed to the lack of provision of modern inputs, the negative impact of droughts, lacking acquisition of foreign direct investment and limited incentives for productivity enhancements due to production quotas (Manyazewal & Shiferaw, 2019). The data for the following decades displays an overall very volatile pattern of TFP growth. The years after the regime change are marked by high rates of productivity growth but are followed by reoccurring slumps. Especially striking is, that after two peaks in 2005 and 2008 productivity displays a trend of decline and stagnation. The period least impacted by shrinking shows the lowest growth rate of TFP on average. Broadberry and Wallis (2017) find that a reduction of TFP windfalls contributed to a decrease in shrinking in industrializing Europe. This trend cannot yet be observed in Ethiopia where TFP growth performance is still dominated by volatility and stagnation.

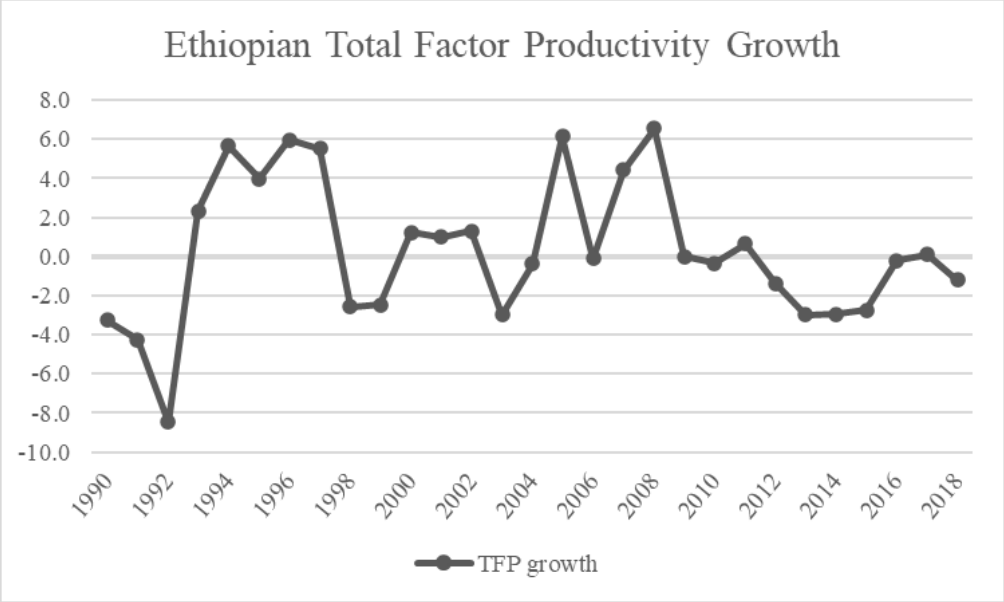

Figure 7: Ethiopian Total Factor Productivity growth rate (The Conference Board, 2019)

Despite the ambitious industrialization plans of the Ethiopian government, the country remains in an early phase of structural transformation with growing productivity of the agricultural sector which remains the major employer in a country still dominated by small-holder agriculture (NPC, 2016; Bachewe et al., 2018; Taffesse, 2019; Mellor, 2017). Furthermore, land largely remains in public ownership. The system will not be considered in detail here, still, it is believed to be an important feature of the Ethiopian political economy that could impede agricultural productivity in the future (Taffesse, 2019). Manufacturing is growing at a large pace, but still takes up only a marginal share of overall output and exports. As observed in other countries in the region, service is starting to dominate agriculture in its contribution to the overall output (Rodrik, 2014). As Figure 5 displays, Ethiopia's growth topology is still highly correlated with growth in agricultural value added. Furthermore, TFP

windfalls have not been eliminated. *Proposition 1* that *structural transformation and growing TFP correlate with improved resilience towards economic shrinking* can therefore not be confirmed for the Ethiopian case in regarded period. This paper argues that reduced volatility of the overall economy in large parts stems from reduced volatility of the agricultural sector.

6.3 Demographic Change

Despite contesting views in academic literature on the exact impact of demographic transition, large shifts in demographics are still believed to impact on the pattern of overall per capita output, as explained in the theory section (Bloom et al., 2003; Broadberry & Wallis, 2017; Galor & Weil, 2000). Therefore, this chapter analyses *Proposition 2: Demographic change correlates with shifts in per capita GDP growth* in the Ethiopian context.

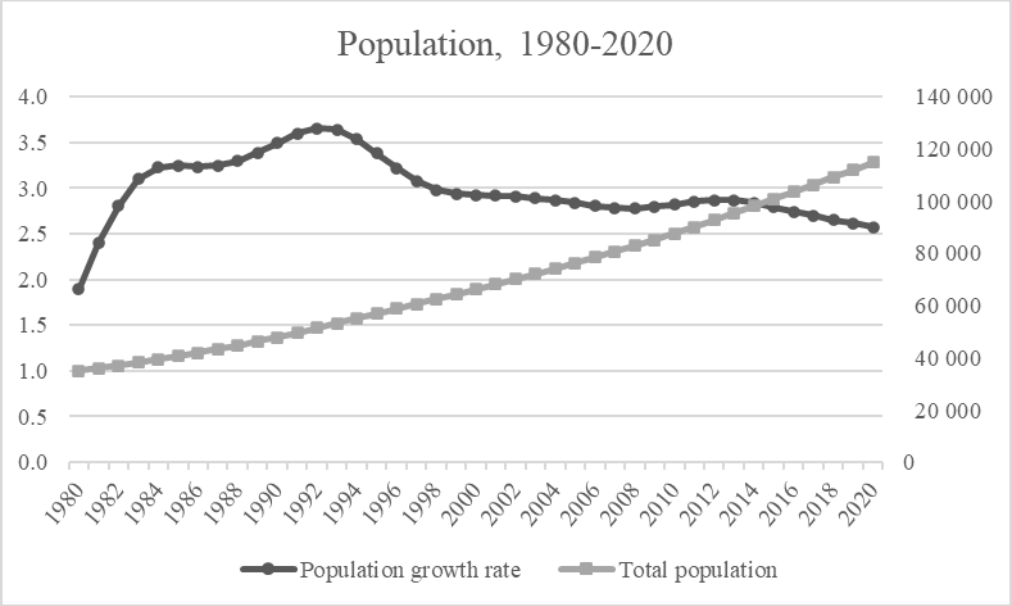

Figure 8: Ethiopian total population and population growth rate (UN, 2019)

Considering Ethiopia's total population as well as the rate of population growth, we observe a continuously expanding population (Figure 8). Population growth accelerated in the 1980s and remained especially high until the beginning of the 1990s, both decades otherwise marked by the dominant impact of shrinking per capita GDP. The peak of population growth was reached at 3.6 % in 1993 and has been declining since, ranging between 2 % and 2.5 % since the turn of the century. Its decline started in the early 1990s when the contribution of shrinking still dominated the overall economic performance and a decade before economic shrinking disappeared. We find the declining trend of population growth since the turn of the century overlaps with the decrease in shrinking in the 2000s only to some extent. The analysis of the population growth rate does therefore not give clear results to be able to doubtlessly confirm *Proposition 2*. Furthermore, Figure 8 does not indicate the occurrence of large shocks

that could have suddenly and substantially altered the output. Despite a growth slowdown, the population is constantly expanding and has more than tripled since 1980. With a population of close to 115 million in 2020, Ethiopia has the second largest population in Africa.

Continuous population growth stems from birth rates outnumbering death rates by a substantial share as shown in Figure 9. In line with population growth, both numbers have continuously declined. Over the whole period, death rates decrease by 69 %, while birth rates decrease by only 33 %, slightly narrowing the gap between them. Furthermore, we observe a declining trend in fertility[4] from seven children in 1980 to four in 2017. Population policy was not incorporated in the national policy agender under the Derg regime, but the transitional government under the EPRDF implemented population policy in 1993. The progress made since manifests itself in a reduction in infant and under-five mortality, large increases in contraceptive prevalence, as well as the share of girls participating in primary education (Groth & May, 2017; UN, 2020c; World Bank, 2020b; NPC, 2016; Hailemariam et al., 2011). In parts, the demographic trend can be attributed to successful public policy and increased economic stability, as fertility declines especially rapidly since the early 2000s.

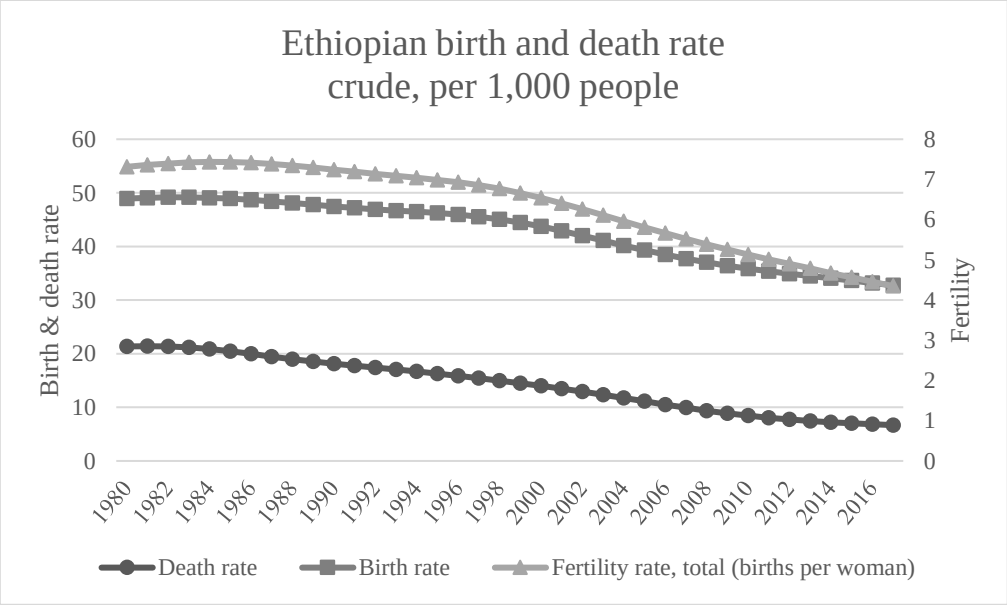

Figure 9: Ethiopian crude birth and death rates per 1,000 people & fertility rate (World Bank, 2020b)

[4] Fertility displays the number of children a woman in her reproductive age is on average giving birth to (World Bank, 2020b).

Despite the decline in fertility, the analysis of Figure 10 reveals the impact of the continuous population growth on age distribution. After being rather stable for decades, the working-age population[5] increased from around 50 % to 60 % over the course of the past ten years. Similarly, the share of the age group under the age of 30 increased up to 80 %. So far, the economy seems to have been able to employ the majority of the growing labour force without major negative effects on economic growth. Observed trends of declining fertility and mortality and an increasingly young population indicate the beginning of a demographic transition that has similarly been witnessed in other developing countries (Bloom et al., 2003: 28). The continuation of the starting trend is confirmed by the modeling of the UN population fund (UN, 2020a). The growth of this *boom generation* can be an opportunity for continuously high economic growth through increasing labour supply and savings, as they are usually higher in the growing working-age population, as well as shifting preferences in human capital formation. At the same time, the economy has to provide the growing young generation with productive employment opportunities and education to increase the skill level of the labour force to make use of the demographic dividend before the population starts ageing (Bloom et al., 2003: 2, 39-42).

[5] Men and women aged between 15 and 65.

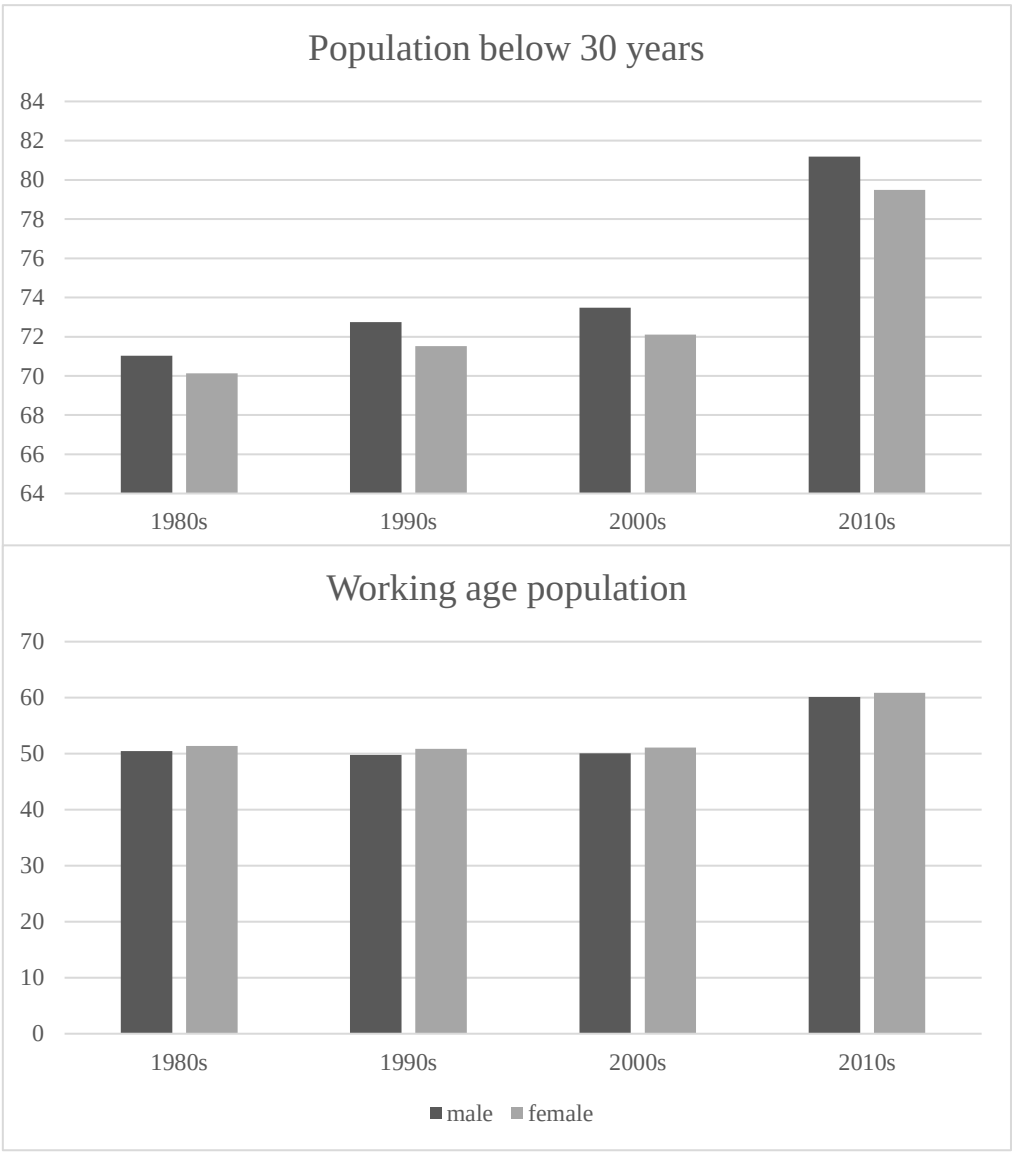

Figure 10: The share of population under 30 years and the share of working age population 1980s-2010s, per decade (World Bank, 2020b)

As expected, the existence of the Malthusian economy cannot be confirmed for the Ethiopian case in the regarded period. Rather the opposite is true, based on an increasing total population coinciding with per capita GDP growth since 2004. However, the analysis indicates the hesitant start of a demographic transition overlapping with a decline in economic shrinking since the 1990s. For the Ethiopian case, we can hence find a correlation between declining fertility and mortality, and from the mid-1990s onward, declining population growth. Still, a growing working age population can only be observed in the past decade. Despite the recent correlation, the analysis hesitates to conclusively confirm *Proposition 2*. The upcoming decades will indicate whether the economy is able to absorb the growing labour force to transform the demographic dividend into a source of economic growth.

6.4 Changing Incidence of Warfare

In search of factors impacting on the reduction of economic shrinking and the transition towards modern economic growth Broadberry and Wallis (2017) analyse the impact of warfare. Several authors as well as the 2011 World Bank Report on *Conflict, Security, and Development* describe the negative consequences of war on economic development including income per capita similarly to Broadberry and Wallis (Clark, 1916; Collier, 2007; Alan et al., 2011; Gates et al., 2012; Dunne & Tian, 2019). This section analyses the correlation between warfare and Ethiopian output in per capita terms based on *Proposition 3: The absence of warfare correlates with improved resilience towards economic shrinking;* for which data from the Uppsala Conflict Data Programme (UCDP) is consulted. The first part of the analysis considers conflicts with government involvements while section two examines non-state conflicts, all of which occurred between ethnic groups, clans or sub-clans. Although Broadberry and Wallis (2017) consider only wars' impact on shrinking, this paper still does not want to entirely ignore minor conflicts (definitions below). Special consideration will be given to ethnic conflicts due to the large role Ethiopia's ethnic diversity plays in the political sphere of the country.

Detailed records categorize armed conflicts in which the Ethiopian government is involved in two intensity levels: Intensity level 1 covers *minor conflicts* with between 25 and 999 battle-related deaths per annum. Conflicts of intensity level 2 are defined as *war* with 1,000 battle-related deaths per annum at minimum (Pettersson, 2019). Figure 11 displays per capita GDP growth on the left y-axis and the conflict intensity on the right y-axis, the latter marking the years in which the Ethiopian government was involved in at least one armed conflict. Years with conflicts of both intensity level 1 and level 2 are marked as conflict intensity level 2 years.

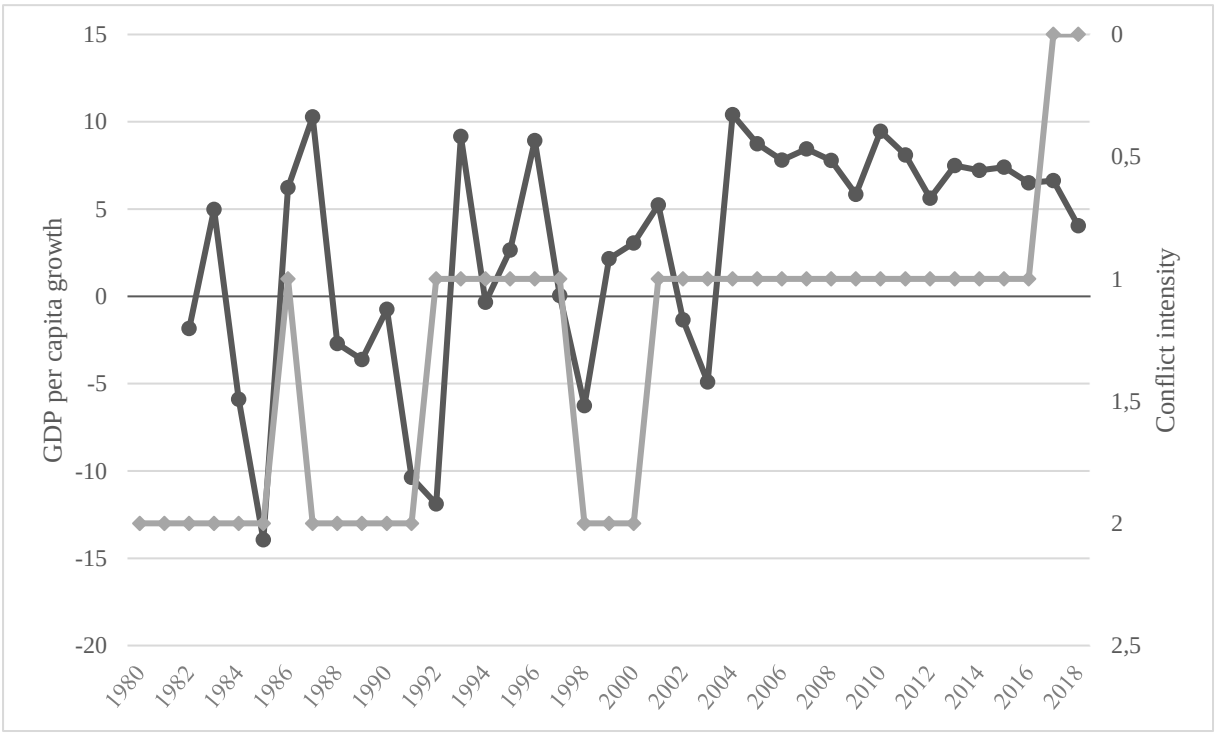

Figure 11: Ethiopan GDP per capita growth (World Bank, 2020b) and conflicts' intensity (Pettersson et al., 2019)

The data reveals the fact that the Ethiopian government has been engaged in conflict for most of the regarded period. In the 1980s, the Derg government was at war (intensity level 2) in nine out of ten years, in 1986 there was a low intensity conflict happening. Throughout the 1980s, until the overthrow of the Derg regime in 1991, various revolutionary groups were fighting against the communist government. Among them the Ethiopian People's Revolutionary Democratic Front (EPRDF) as a coalition of several groups eventually overtaking the Derg government and remaining in power from 1991 until 2019 (Pettersson et al., 2019). In the 1990s, warfare is still prominently occurring in four years. Years in which the country was at war reduced substantially in the 2000s with only one year (2000) marked by a high intensity conflict. In remaining years, the government still participated in low intensity conflicts. Observed trend only stops in 2016, the last year in which the Ethiopian government is involved in armed conflict. In line with the definition of war provided by the UCDP, we can find evidence for *Proposition 3* to be true. The gradually declining trend in the frequency and magnitude of shrinking correlates with a declining trend in the frequency of years in which at least one armed conflict follows above definition of war. With a time lag of three years, the end of the high intensity conflict in 2001 was followed by high growth rates and the disappearance of shrinking.

The conflict spanning almost the entire period regarded was the one between Ethiopia and Eritrea. The dispute over independence and later territory was of high intensity in the early and late 1980s, as well as from 1998 until 2000 (Pettersson et al., 2019). Following Italian colonialism and subsequent British trusteeship a UN resolution decided Eritrea and Ethiopia should form a new federalist state under the Ethiopian imperial government in 1952 (Abbay, 2004). However, Eritrea fought for independence. At first from the imperial government of

Haile Selassie and later from the Derg regime. The Eritrean People's Liberation Front (EPLF), in collaboration with the Tigray People's Liberation Front (TPLF)[6], played a decisive role in overthrowing the military regime in 1991 and was soon granted independence (Abbay, 2004; Cheeseman et al., 2019; Weldemichael, 2014; Zondi, 2006). Throughout the 1990s, new conflicts boiled under the surface, fed by the expulsion of Ethiopian citizens from Eritrea, openly expressed antagonism towards Eritreans in Ethiopia, border disputes and diverging economic policies (Triulzi, 2002; Zondi, 2006; UCDP, 2020a). The war started with the Eritrean invasion of the village Badame which should remain conflicted territory for decades (Cheeseman et al., 2019). After two years of war, a peace agreement signed between the two governments in 2000 as the result of international mediation. However, despite the written consensus that the area of conflict should be ruled by the Eritrean-Ethiopian Boundary Commission, Ethiopia did not withdraw its occupying troops from the territory. The following 18 years were marked by reoccurring minor conflicts between both countries' armies, in a situation described as *no war, no peace.* In the absence of mediation by international organizations, both governments signed an agreement of rapprochement in July 2018, finally pacifying one of the most long-lasting conflicts in the region (Cheeseman et al., 2019; Bereketeab, 2019; Pettersson et al., 2019; UCDP, 2020a). Like all conflicts, the Ethiopian-Eritrean war entailed large direct and indirect economic costs, especially in the intensive phase from 1998 to 2000. The costs were mainly connected to the destruction of physical and human capital and the public investment diverged into maintaining and potentially winning the conflict (Clark, 1913). A cooling down of an intensive conflict allows redirection of investment into reconstruction of physical capital and formation of human capital. The ending of extensive combat activities, therefore, has potentially positively impacted economic stabilization.

Moreover, the Ethiopian government has been involved in conflicts with Somalia concerning the Ogaden region which Somalia had tried to annex. The conflict among governments was of low intensity in 1980 while the struggle of the Ogade Liberation Front was of high intensity in 1981 and then remained at a low-intensity level until 2016[7].

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[6] The TPLF was part of the coalition forming the EPRDF who ruled the state from 1991 until its dissolution in 2019 (Yibeltal, 2019).

[7] With the exception of the years 1982, 1993, 1996 and 1997 where no more than 25 deaths have been reported.

The Somali government argued on cultural and social grounds when claiming the region belonged to Somalia (UCDP, 2020b). This reveals a deep-rooted characteristic of the Ethiopian society: its ethic fragmentation as shown in Figure 12.

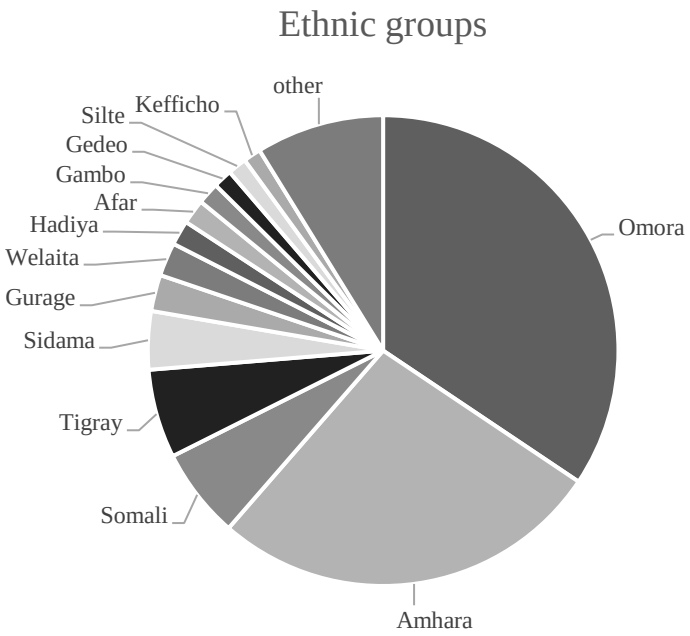

Figure 12: Ethiopian population's ethnic groups (CIA, 2020)

For the Ethiopian case, data on non-state conflict reveals ongoing tension among ethnic groups and clans throughout the country. Figure 13 displays the number of non-state conflicts on the left axis and the number of deaths on the right axis, as a sum of all homicides connected to non-state conflicts. The conflicts do not fall into the category of a war and therefore cannot strictly be interpreted following the *Theory of Shrinking*. However, despite a peaceful episode of five years from 2010 to 2015 and the years of 1994/95/97, all regarded period (1991 to 2018) has been marked by at least one non-state conflict all of which were conflicts between different ethnic groups or clans, as opposed to economic classes for example (even though both categories are not mutually exclusive).

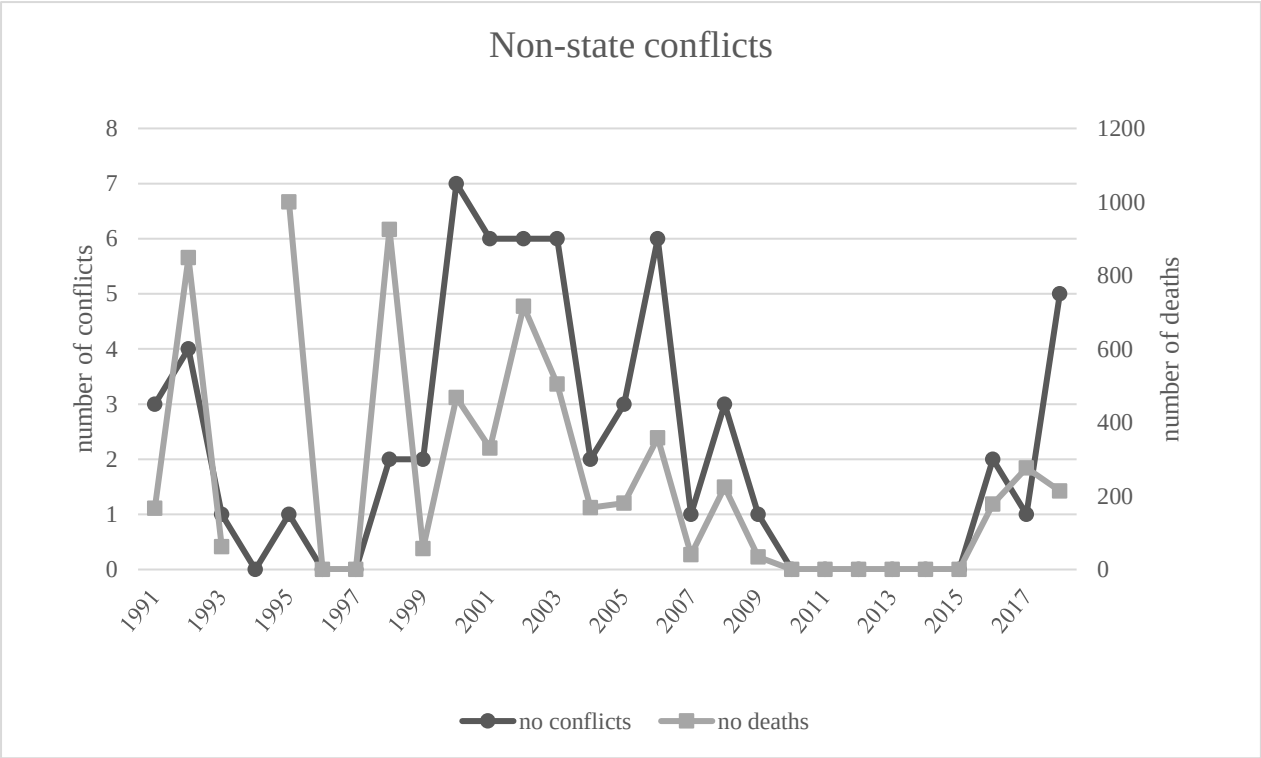

Figure 13: Non-state conflicts in Ethiopia (Pettersson et al., 2019)

While Ethiopia has a long history of ethnic diversity, the regime overtaking power in 1991 organized the federal state along ethnic lines. Taye (2017) and Fiseha (2019) argue that Ethiopia's ethnic federalism has increased conflict between ethnic groups. This analysis cannot make a conclusive statement about that, due to the lack of available data before 1991. However, in line with Easterly and Levine (1997) and Posner (2004), it is believed that ethnic fragmentation and internal tension impedes the process of sustainable economic growth. It does not put as severe shocks to the economy as high intensity conflict, in which more people are involved in combat and traumatized, wounded and killed, and in which physical capital is destroyed only to a minor extent. Nevertheless, it shows that the institutional framework does not provide enough mechanisms to solve social conflict without the involvement of arms. Impacts on economic activity are found to be an economically uncertain environment and non-cooperative behaviour leading to inefficiencies (Rodrik, 1999). For the Ethiopian case, Pellerin (2019) found that ethnic federalism impedes cooperation within the business community. The impact of ethnic federalism on the development of impersonal rule will furthermore be considered in the following section.

When strictly relating proposition to warfare, correlation can be found between the reduced contribution of shrinking to GDP per capita and the reduction of armed conflict with battle-related deaths of at least 1,000 people per annum. Extending *Proposition 3* for minor conflicts, we do not see a reduction in conflict correlating with the reduction of economic shrinking. The past years rather brought an increase following a peaceful period in terms of ethnic conflict.

6.5 Institutional Change

The following section analyses *Proposition 4: Institutional change towards an open access society dominated by impersonal rule correlate with improved resilience towards economic shrinking.* Broadberry and Wallis (2017) argue that institutional change is the single ultimate factor that leads to stable and sustained modern economic growth. Their framework refers to the conceptualization of social orders developed by NWW (2009). The core argument states that the transition from a natural state, dominated by identity rule, to an open access society in which rules are impersonal, is crucial for the transition to modern economic growth. In a system of identity rules, close ties to an organization holding political and/or economic power is the sole way to becoming a member of an elite organization or form a new organization. An open access order, on the contrary, is dominated by open competition and everyone's equal ability to address issues and form organizations. The ideal of impersonal rule is rarely fully achieved in reality, still, correlations are found and causalities are drawn between long-term economic success and open access orders largely dominated by impersonal rule (NWW, 2009: 8; Cuberes & Jerzmanowski, 2009).

The following analysis aims at tracking institutional change occurred in Ethiopia since 1980. Hereby it ought to be mentioned once more, that the time frame considered is rather short for complete transitions to occur. Furthermore, in many cases one can identify indicators of different orders, a natural state can have some features of an open access order without having achieved a full transition. The analysis of Ethiopia aims at providing an overview of the country's recent institutional development and find factors indicating a certain order. Without claiming to be exhaustive, it tries to capture formal and informal rules, as well as social and economic outcomes. Institutional indices, on autocracy and democracy, as well as the aspects of rule of law and freedom of association, will be considered. Furthermore, economic outcomes like private sector development and levels of inequality are incorporated. Government spending on health and education is used as an indicator of the size of the government.

Ethiopia is a particular case in terms of it being one of the only two Sub-Saharan African countries that have never been colonized, with a long history of institutions independent from foreign rule (Bedasso, 2017). The century-old empire was overthrown by the communist military regime Derg in 1974. The analysis starts in 1980, six years after the Derg took over and started transforming the country into a centrally planned economy under strict authoritarian rule.

As NWW (2009) refer to the Polity IV index to show a large correlation between political and economic development. Therefore, the index is consulted in the analysis to distinguish trends and shifts in Ethiopia's social order. Figure 14 plots the Polity IV index against per capita GDP growth to connect institutional changes to changes in the impact of economic shrinking. The index ranges from -10 (strongly autocratic) to 10 (strongly democratic). The Polity IV measure was the lowest during the period when Ethiopia was governed by the Derg regime, the time in which also economic shrinking occurred the most. The beginning of the 1990s was marked by a transition in which no clear measure could be obtained. After the new

constitution was formalized under the EPRDF in 1995, the Polity IV turns slightly positive with a value of 1 (Vaughan, 2011; Clapham, 2019). Surprisingly, most of the period in which economic shrinking disappeared coincides with sudden deterioration of the polity measure. The change stems from a decrease in the competitiveness of executive recruitment that can be connected to the 2005 elections. The elections were the first ones regarded as free by the international community, with a realistic chance of the opposition to competitively participate in the elections. The result was a great loss of electoral support for the ruling party. In the aftermath, severe repressive measures were launched against the opposition with a series of imprisonments of opposition leaders, journalists and other individuals who expressed discontent with the ruling EPRDF. The following two elections in 2010 and 2015 were again dominated by the ruling EPRDF (Dejene & Cochrane, 2019; Clapham, 2018; Asefa, 2003; Nega, 2010; Arriola, 2003; Arriola & Lyons, 2016). The sudden recovery of the Polity IV measure in 2018 occurs in the year of the election of Abiy Ahmed Ali, who initiated a large number of reforms towards increasing freedom of opposition, civil society and press and under whose rule large corruption processes against former elite members commenced (Bereketeab, 2019; Blyth & Moges, 2019; Freedom House, 2020; Dejene & Cochrane, 2019).

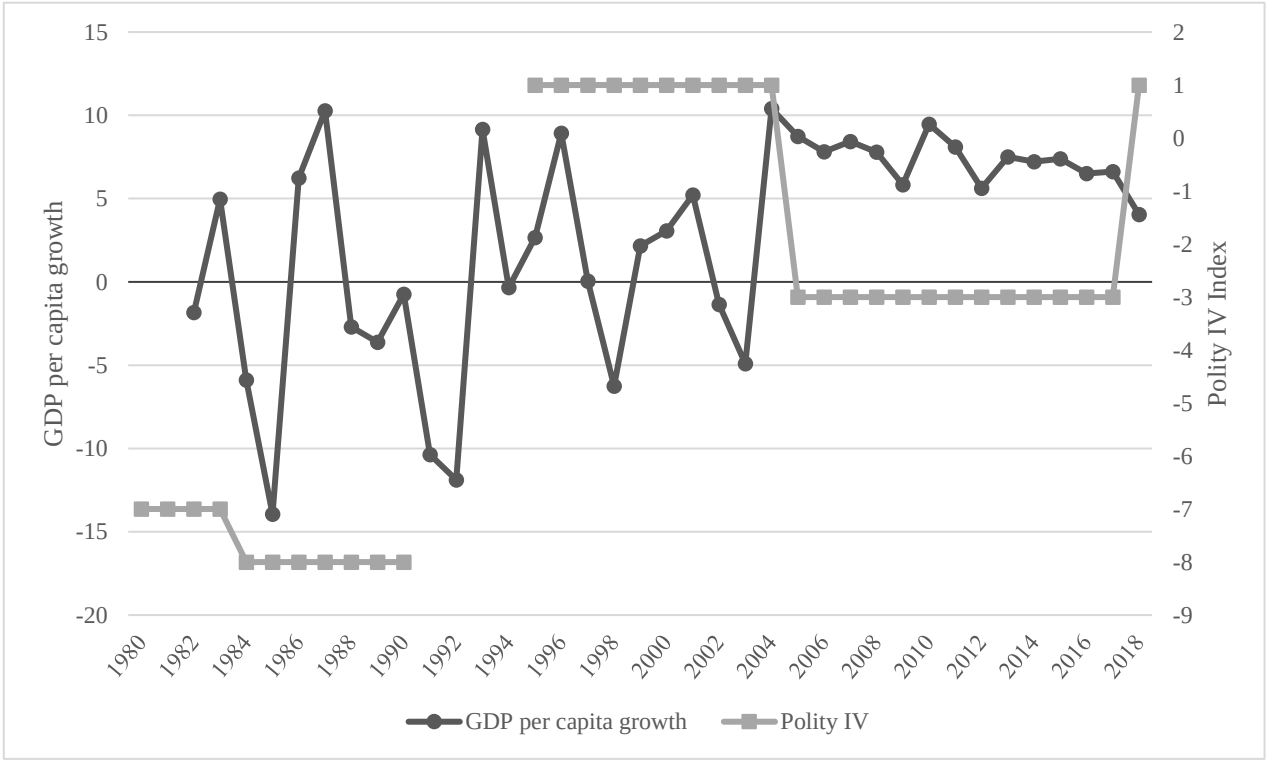

Figure 14: GPD per capita growth (World Bank, 2020b) and the Polity IV Index (Marshall et al., 2019)

The highest Polity IV score Ethiopia reached over the whole regarded period was 1, which is still far from strongly democratic. This implies that the country cannot in any year be classified as an open access order, with a truly competitive process of electing the executive, institutionalised constraints on the power of the leader of the country and civil liberties enjoyed by all citizens, no matter which organizational identity they carry. The analysis rather suggests that Ethiopia remained a natural state over the whole period under investigation. The country has not yet made a transition towards an open access society which is regarded as the key element in achieving resilience towards shrinking and a long-term stable economic development by Broadberry and Wallis (2017). Still, some changes have taken place over time, potentially impacting the economy's resilience towards shrinking. The following paragraph describes the three types of natural states (NWW, 2009).

NWW (2009) distinguish between three types of limited access orders: fragile, basic and mature natural states. The main features of a **fragile natural state** are a highly personalized character of the elite organization and therefore strong identity rule, extensive internal and external violence due to which the ruling elite is struggling to sustain itself, a close link between economic and political success, an institutional and organizational structure of low complexity, as well as the dominance of patron-client networks. The **basic natural state** manages to provide standard solutions to reoccurring problems, such as the succession of elites and the provision of public goods. Still, organizations not directly connected to the state are rare and elite organizations are still closely tied to the identity of their leaders. The **mature natural state** is capable of supporting perpetually lived organizations, as the organization is not any more inseparably tied to the identity of the ruler. Hence, larger and more complex organizations are able to develop under private and public law defining the relationship among individuals and organizations. One main feature of the mature natural state is the gradual emergence of private organizations that enjoy certain independence from the state. Still, impersonal rule is not yet fully achieved and the ruling elite controls a substantial share of power and resources (NWW, 2009).

The UN defines rule of law as a *principle of governance in which all persons, institutions and entities, public and private, including the state itself, are accountable to laws that are publicly promulgated, equally enforced and independently adjudicated* (UN, 2020b). This closely connects to the concept of impersonal rule, developed by NWW (2009) and emphasized by Broadberry and Wallis (2017: 24), briefly summarized as *rules that treat everyone the same* no matter which organizational identity they belong to. This seemingly simple concept is interlinked with mechanisms of conflict resolution among the dominant coalition as well as among citizens, the establishment of organizations that are independent of the ruling elite and therefore the establishment of civil society and a vibrant private sector (NWW, 2009: 47-48). The V-Dem dataset provides an index measuring the rule of law and ranging from 0 to 1 as displayed in Figure 15 together with the index for freedom of association.

The rule of law takes a distinct leap between 1990 and 1992, marking the transition from the military Derg regime to the rule of the EPRDF. It then ranges between 0.3 and 0.4 for 25 years until a further surge in the past two years up to 0.55 in 2019. That indicates that Ethiopia fulfills the highest standards on the transparency of law that is independently, predictably, impartially and equally enforced among organizations, government officials and other individuals only to 55 % in 2019. This number provides limited implication on the exact

manifestation of the rule of law in Ethiopia. It nevertheless suggests that, despite the great achievements of the previous decades, Ethiopia is still in large parts governed by identity rule.

The Ethiopian federal system anchored in the 1995 constitution and designed by the transitional government under the EPRDF, incorporates a strong focus on ethnic identities. That seemingly has some implications on identity rule. The EPRDF itself is an alliance of four groups based on ethical grounds which collaboratively fought the military Derg regime: OPDO (Ormono Democratic Party), ANDM (Amhara Democratic Party), SEPDM (Southern Ethiopian People's Democratic Movement) and TPLF (Tigray People's Liberation Front) (Bereketeab, 2019). Ethnic identity is expressed in the federal structure of the state in which the majority of the regional states were formed based on the ethnic roots (Mengisteab, 2019). Criticism was voiced that the system creates intra-ethnic tensions, fueled by ethnic hatred voiced by public officials e.g. before the 2005 elections (Fiseha & Gebresilassie, 2019; Taye, 2017; Nega, 2010). This system emphasized the ethnic identity of individuals and might to some extend impede the creation of a system of impersonal rule. The coalition of the EPRDF dissolved in 2019 after its 28-year long rule. A new party was formed under the new Prime Minister Abiy Ahmed Ali, merging the three remaining members of the EPRDF coalition with several affiliates to the Prosperity Party (Freedom House, 2020). One aspect differentiating the new party from the EPRDF is that it aims to include people from all ethnic groups, as opposed to only ethnicities belonging to one of the former coalition parties (Yibeltal, 2019). This could be read as an indicator of a commencing shift towards impersonal rule.

Figure 15: Indices for rule of law and freedom of association (Coppedge et al., 2020a)

The freedom of association index in Figure 15 shows the development of non-elite organizations in the political and non-political spectrum (Coppedge et al., 2020b). During the Derg regime opposition parties and the civil society were largely oppressed (Dejene & Cochrane, 2019). Upward shifts in the index can again be observed after transitioning to the

new rule in the early 1990s, as well as in the past two years. The first shift must be driven by improved support of the civil society by the new government. At the end of the 2000s, the indicator takes a slight downward movement. According to Nega and Milofsky (2011), the government was increasingly threatened by civil society potentially weakening their authoritarian control. The development culminated in *The Charities and Societies act* of 2009 that largely restrained civil society activity as it prohibited international involvement in NGOs, including funding by the diasporic community (Nega, 2010).

The room for opposition parties remained limited during the EPRDF rule when opposition members feared imprisonment and killings. The EPRDF continuously held the great majority of the seats, as they prohibited opposition parties from growing stronger. The 2005 elections were regarded as the first ones in Ethiopian history allowing real competition from opposition parties (Arriola, 2003). The aftermath does not seem to be manifested in above-mentioned freedom of association index but potentially impacted on the Polity IV measure in Figure 14. Unofficial results indicated the victory of the opposition parties, while the official results National Electoral Board of Ethiopia confirmed a triumph of the ruling EPRDF winning 60 % of the votes, in addition to 8 % won by government-affiliated parties (Carter Center, 2009). The opposition did not accept the results and their protests were violently suppressed, leading to the deaths of almost 200 people. Furthermore, an estimate of 30,000 opposition leaders and supporters ended up in prison (Arriola & Lyons, 2016). The *Anti Terrorism Proclamation* has been passed in 2009. It frequently criminalised the work of journalists opposing the government (Arriola & Lyons, 2016).

The above-described indices and events suggest that Ethiopia under the Derg regime displays many characteristics of a fragile natural state such as a highly centralized elite rule with almost complete oppression of organizations outside the ruling elite and internal violence by rebel groups fighting the regime. The end of the Derg rule brought some release to the firm authoritarian grip. The strong pressure on the opposition and civil society representing private elite organizations independent from the ruling elite indicate a basic natural state under the EPRDF rule. The 2005 elections further confirmed that the space for civil society and opposition parties remained very limited. However, standard solutions to reoccurring problems can be found, like the peaceful succession after the death of long-term leader Meles Zenawi to Hailemariam Desalegn (Clapham, 2018) which furthermore indicates a degree of independence between the organizational identity and the individual identity of the ruler. The EPRDF seemed to be a perpetually lived organization. Nevertheless, internal conflicts lead to last year's dissolution and the establishment of a new party whose identity is seemingly closely connected to Abiy Ahmed Ali. Other very recent developments could still suggest a beginning shift towards a mature natural state. The new government released a *Civil Society Proclamation* again widening the space for organisations outside the direct control of the state, repealed the 2009 *Terrorism Law*, released imprisoned journalists and opposition leaders and invited exiled opposition leaders to return to Ethiopia and engage in the political process, limited the role of the military and promised free elections in 2020 (Dejene & Cochrane, 2019; Freedom House, 2019; Freedom House, 2020; Bereketeab, 2019). The findings are in line with *Proposition 4* in regards that economic shrinking is reduced by an overall institutional change, from a fragile to a basic natural state. The decade most impacted by economic shrinking was the one associated with the lowest scores in rule of law and freedom of association. The increasing establishment of rule of law and freedom of

association, both coming from very low levels, have potentially added to the stabilization of economic activity and the reduction of shrinking. However, after the transition in the early 1990s, the Polity IV indicator worsened again between 2005 and 2017, and the indices for rule of law and freedom of association remained rather stagnant until 2017. Despite recent developments indicating a starting transition towards a mature natural state, three things should be kept in mind regarding the impact of Ethiopia's social order on its resilience towards shrinking. Firstly, the time frame considered is rather short, as large institutional transitions usually take several decades. Secondly, even with the improvements made in the regarded period, the country is still far from being considered an open access society. Broadberry and Wallis'(2017) framework suggests that sustained resilience towards economic shrinking requires a full transition towards an open access order. Thirdly, their theoretical framework does not assume a continuous unconditional development towards an open access society. The experiences of Ethiopia show that backlashes and rebounds, as well as simultaneously occurring implications for different orders are possible. Furthermore, it underlines the essential need to cover various aspects when aiming at understanding aggregate trends.

Broadberry and Wallis (2017) and NWW (2009) suggest that a gradual movement towards impersonal rather than identity rule gives incentives to private actors to form organizations outside the spectrum of the state. On the back of this assumption, the analysis does not only want to consider the space of civil society organizations and opposition parties, covered by the above indices but also take into account private economic activity. Furthermore, institutional reforms reducing uncertainty are found to provide incentives for increasing private sector investment with a positive impact on economic growth (Poirson, 1998; Knack & Keefer, 1995; Brunetti et al., 1996) and the reduction of shrinking. Data on gross capital formation as a share of GDP is obtained from the AfDB's database. It is analysed to uncover whether incentives to invest in private businesses have improved. This is seemingly true in the Ethiopian case as displayed in Figure 16. After a spike in 1988 that can potentially be attributed to the shifting attitude to the public sector in the late years of the Derg regime (Manyazewal & Shiferaw, 2019). The acceleration from 6.5 % in 1992 to 10 % in 1993 can be connected to the transition from the communist Derg regime, which had largely nationalized economic activity, to the more market-oriented EPRDF rule. However, the private sector's gross capital formation ranged between 7 % and 11 % until it started a gradual and hesitant acceleration in 2011 peaking at 26.5 % in 2018. Interestingly, this rise only started seven years after the stable high-growth period that brought the recent disappearance of shrinking.

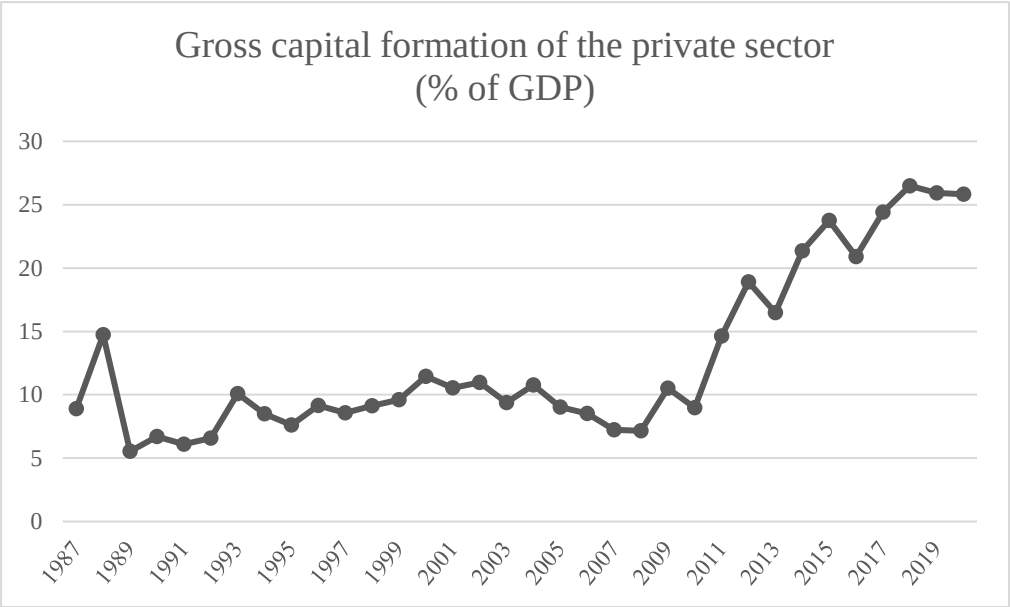

Figure 16: Gross capital formation of the private sector in percent of GDP (AfDB, 2020)

Following the Derg regime's socialist model of economic development, largely dominated by the nationalization of economic activity, the new government from the 1990s onwards adopted a developmental state model. The model was largely inspired by the model of the East Asian industrializers. The state has a strong coordinating role over economic activity with heavy market interventions and aims at fostering economic growth and industrialization (Dejene & Cochrane, 2019; Chang & Hauge, 2019). Despite the recent growth in gross capital formation suggesting growth in the private sector, academic literature and the most recent Freedom House country report suggest that the government elite maintains close connections to the private sector. It still is dominated by state monopolies in the telecommunication, shipping and aviation industries. Fearing opposition by individuals holding economic power in the country the EPRDF elite posed increasing pressure on the private sector from the early 2000s onwards. Economic success became even more dependent on being on favourable terms with the political elite (Mulat, 1994; Freedom House, 2020; Chang & Hauge, 2019; Pellerin, 2019; Nega, 2010; Clapham, 2018). It ought to be seen whether the plans of the Abiy government of privatization of state monopolies and stimulation of private entrepreneurship have liberating effects on the private sector (Freedom House, 2020).

The analysis of the private sector finds limited support for *Proposition 4*. Despite the recent acceleration of gross capital formation the private sector still seems to be largely connected to the political elite. Private entrepreneurship and the development of small- and medium-sized private businesses that potentially improves overall economic activity is still limited. The announcements of the Abiy government still have to prove whether they will loosen the ties between the ruling elite and the private sector fostering the development of private organizations in the economic sphere.

The analysis aimed to take the share of informal employment into account, to account for businesses operating outside the legal framework of the state. Unfortunately, exhaustive data spanning the regarded period at least in parts could be found. An estimate for the year 2013

provided by the ILO suggests a share of informal employment of 85.8 % including agriculture, and 67.8 % excluding agriculture (ILO, 2013). Hesitant to draw a conclusive connection between the share of Ethiopia's informal employment and its impact on economic shrinking, due to lacking data, the substantial share of informal employment still is believed to confirm the lacking ability of the natural state to equally include all economic actors.

Broadberry and Wallis (2017: 25) mention that a change from identity towards impersonal rule *requires a shift in the patterns of social dynamics.* One manifestation of these social dynamics in the realities of citizens is equality in the distribution of available economic resources. Therefore, the analysis considers the distribution of incomes by the Gini Index. While it is the most commonly used inequality measure one of its main limitations is that it is not easily decomposable or additive. This is why data on the distribution of resources across the quintiles of the income distribution is additionally considered. The data is obtained from the UNU-WIDER database on inequality. The Gini Index for the year 1982 could only be obtained for the rural area while the remaining numbers were calculated for the entire country. As the Gini Index for the rural area in all other years was slightly lower than the overall index, it is assumed that this is similar for 1982.

Table 4: Gini Index (UNU-WIDER, 2019)

Year	Gini
1982	32.42
1996	44.56
1997	44.1
2000	29.98
2005	29.81
2011	33.17
2016	34.99

Compared to available data on other Sub-Saharan African countries, Ethiopia is among the countries with the lowest inequality in the region throughout the whole period (World Bank, 2020b). This in some parts roots in the large share of the population living in poverty and for a long time the majority of the society was equally poor. In 1995, 71.1 % of the population lived below the $1.90 per day poverty line and 89.6 % below the $3.20 line. Changes have occurred in the past 20 years with a government actively tackling poverty reduction. In 2015, the poverty shares were reduced to 30.8 % and 68.9 % respectively (World Bank, 2020b). Coming back to inequality, we can clearly observe a decrease from the mid-1990s until 2005, a period also marked by a reduction in economic shrinking. The high growth performance since led to an increase in income inequality. However, the levels are still lower than in the economically volatile 1990s.

For a more comprehensive picture of inequality the income shares along the income distribution will be analysed (Figure 17). The income share of the upper 20 % of the income distribution has been the largest throughout the whole regarded period ranging between 39 % and 55 %. The slightly reduced rate of shrinking in the 1990s coincides with a large increase in the income share of the richest 20 %, which led to a decrease in the poorer income shares. A sudden shift comes in the early and mid-2000s, accompanied by a gradual reduction in shrinking and the reduction of the income share of the rich in favour of the poor. The years marked by a high growth performance and the disappearance of shrinking were led by a gradual backward movement to 1982 levels, with a slight increase in the share of the richest, as well as the poorest 20 %. However, as mentioned above the numbers from 1982 only

encompass the rural areas and are believed to underestimate the income share of the richest population which is more likely to live in urban areas. The share of the 4th quintile was quite stable ranging between 18 % and 21 %, the share of the 3rd quintile with 16-17 % since 2000 was also relatively stable. The share of the 2nd poorest quintile was around 10 % in the 1990s and has since then remained between 12 % and 13 %. Since then it has again slightly decreased, reaching 7 % in 2016. These results on the distribution of income inequality do not lead to a clear confirmation of *Proposition 4*, as the decrease in the share of the poorest quintile has coincided with the disappearance of shrinking. Still, increasing stabilization of GDP per capita up to the mid-2000s was accompanied by a strong decrease in inequality. Nevertheless, the large jump between 1997 and 2000 seems odd, as it does not coincide with major policy changes. Even though the quality of data is assessed to be high by the UNU-WIDER database, errors of measurement might have occurred.

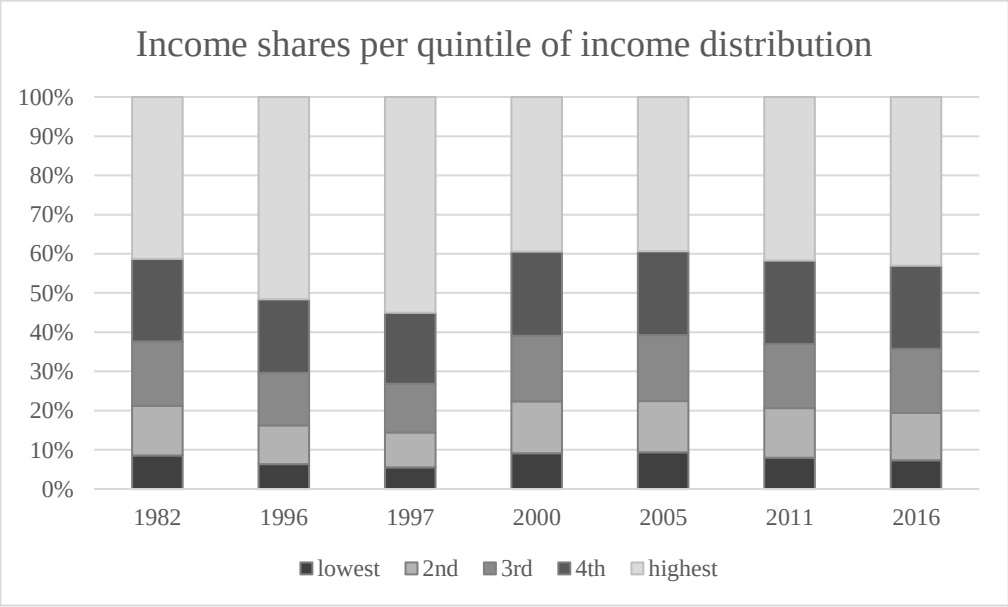

Figure 17: Income share per quintile of income distribution (UNU-WIDER, 2019)

NWW (2009: 112) suggest that not only the size of the organizations outside the spectrum of the state elite increase when a country develops towards a more open access order but also the size of the government itself. They suggest an increase in public spending on education and health. Figure 18 displays data from the WDI on the share of public spending dedicated to health and education. The education data displays some large gaps while the data on health expenditure only starts in 2000. The health data does therefore not enable a comparison to the high-shrinking decades of the 1980s and 1990s. The data on education expenditure still allows for distinguishing an overall trend.

Education expenditure in the 1980s was comparatively low, ranging between 9.7 % and 12.5 %. The three years in which data is available in the 1990s show a slight increase, ranging between 13.2 % and 14.8 %. Numbers are again slightly higher in the early 2000s and take off in the late-2000s, peaking at 30.5 % in 2012. Recent years have come with a gradual decline of up to 5 %. Still, the overall trend of government expenditure in education as a share of total government expenditure confirms *Proposition 4*. A rising trend in education expenditure

correlates with the reduced impact of shrinking. Furthermore, the education expenditure seems to have been fruitful. WDI data suggests that school attainment has increased substantially. In 1987 a share of 29 % of school-aged children went to primary school. This share subsequently increased and reached 85 % in 2015 (World Bank, 2020b).

Health expenditure shows a less clear trend. Starting at 7 % in 2000 it follows a slightly volatile downward trend which recently stabilized around 5 %. The data on health expenditure does therefore not confirm *Proposition 4*. Still, it ought to be mentioned that health indicators like infant mortality and life expectancy have largely improved since the 1980s. While in 1980 239 out of 1,000 live births died within the first 5 years of their lives, in 2018 only 55 children out of 1,000 did not survive until their 5th birthday. Life expectancy at birth grew from 43.7 years in 1980 to 66.2 in 2018 (World Bank, 2020b).

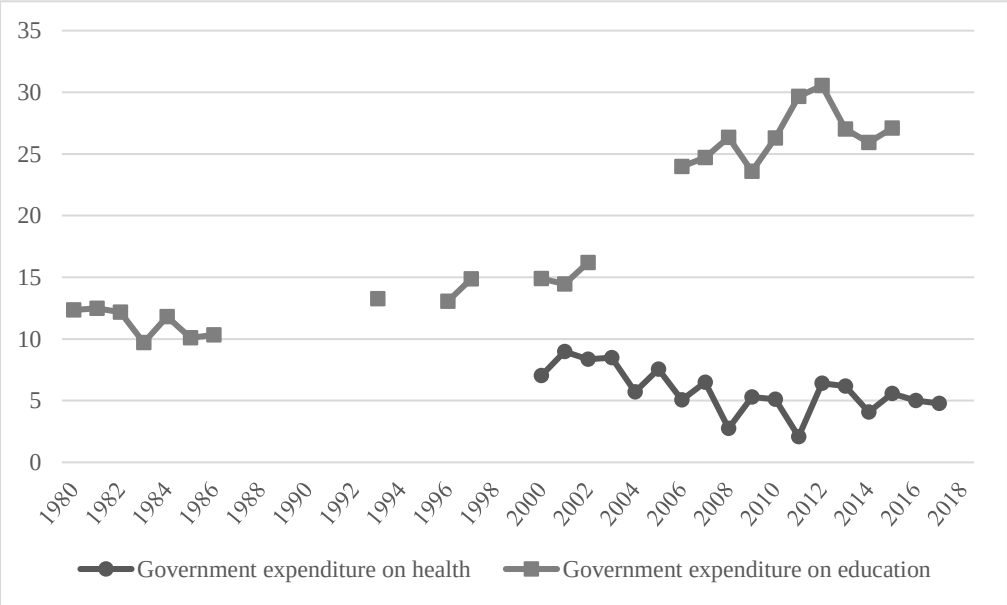

Figure 18: Government expenditure on health and education in percent of general government expenditure (World Bank, 2020b)

According to policy papers and official statements, *Ethiopia's vision is to reach the level of lower middle-income countries where democracy, good governance and social justice are maintained through people's participation. The realization of this vision calls for creating competitive, productive and inclusive economy in all its aspects* (NPC, 2016: 76). The different aspects considered in the institutional analysis suggest that, despite impressive strides, Ethiopia still has a long way to go in order to achieve the above-mentioned statement and the transition towards an open access order. The past 40 years have confirmed that institutional change takes time and does not unconditionally lead into one direction. The 1980s were dominated by a very limited access order and a large impact of shrinking were taken over by a less limited access order in the 1990s bringing some resilience towards economic shrinking. The institutional indices again jumped upwards in 2018 when Abiy Ahmed Ali became Prime Minister. His government further loosened the authoritarian grip on the civil society and the opposition, put pressure on the corrupt elite and promised more independence of the private sector. Whether these developments lead to further sustained

movements towards an open access society ought to be proven in the upcoming years. Existing ethnic disparities, close ties between the ruling elite and the private sector and increasing economic inequality are not easily dissolved.

6.6 Discussion

Based on Broadberry and Wallis (2017) *Theory of Shrinking* this dissertation set out to assess the correlation of four different factors investigating Ethiopia's resilience towards shrinking. We can confirm the findings of Prichett (2000), Radatz (2007) and Jones and Olken (2008) who state that low-income countries are often characterized by reoccurring growth collapses. However, the analysis of the overall growth performance since 1980 shows that Ethiopia has managed to gradually reduce the contribution of shrinking to GDP per capita. The trend accumulated in the disappearance of economic shrinking since 2004. From the small but growing strand of literature that deals with certain halts and accelerations to GDP per capita, Broadberry and Wallis (2017) *Theory of Shrinking* was chosen to analyse some of the multifaced factors shaping the topology of economic growth and that are found to correlate with the resilience towards economic shrinking. The factors considered were separated into proximate and ultimate factors. The former regard structural and technological change, demographic change and changing incidence of warfare. The latter ultimate factor in building up resilience towards shrinking is institutional change. The results concerning each factor will be discussed in the following, before concluding on the overall developments.

Theory and evidence have proven that **structural transformation and technological change** are closely interconnected developments, therefore they were regarded in one section. The analysis suggests that the growth topology of the overall economy has been and remains closely connected to the agricultural sector. Both patterns of growing and shrinking are closely linked, as displayed in Figure 5. The stable growth of the agricultural sector seems to have stabilized the overall economic activity. The dominance of the agricultural sector slowly declines since the turn of the century, indicating a starting structural transformation. Further diversification of economic activity away from the volatile agricultural sector is crucial to sustain stable long-term growth. The government seems to have witnessed the importance of this trend and publishes ambitious five year plans every year. The emphasis on the development of a light-manufacturing sector slowly starts to manifest in its high growth rates. Still, its share in GDP remains marginal and some authors claim missing links between manufacturing and agriculture and service (Manyazewal & Shiferaw, 2019; Bezawaga et al., 2018). Similarly, the complexity of exports has not yet witnessed diversification towards light manufacturing exports the government policies aim to induce. The complexity of exports is rather decreasing. High-commodity prices of recent years (Manyazewal & Shiferaw, 2019) might have kept this from impacting on economic shrinking, still, it does not indicate increasing resilience towards shrinking. Correspondingly, TFP reverses are still present in Ethiopia's overall economic activity. Growing productivity in the agricultural sector seems to have impeded large negative consequences on GDP per capita growth (Alemayehu, 2001; Manyazewal & Shiferaw, 2019; Bachewe et al., 2018). Furthermore, investments in education considered in the section on institutional change show the government's awareness of the

importance of an educated labour force. This has not yet strongly manifested in productivity growth that would add to the resilience towards shrinking.

Shocks and trend breaks to the **demographics** of a country are believed to impact an economy's growth topology, altering the structure of the labour market and capital available per worker. While the Ethiopian population grew constantly since 1980, it experienced a trend break towards a declining population growth rate in the early 1990s. Large shocks have not been observed in the analysis of the Ethiopian demography and evidence for *Proposition 2* to be proven as true is not sufficient. So far, demography does not seem to have substantially affected the topology of economic growth. However, recent trends indicate the start of a demographic transition that could be seen as great potential as well as hindrance to further economic development. The working age population experiences a large growth, jumping from 50 % to 60 % of the total population in the past decade. If the Ethiopian economy is able to create productive use of the continuously growing demographic dividend in the upcoming years, the overall economic output would be enhanced and further stabilized. A lacking provision of employment would create a burden with destabilizing effects to GDP per capita trends (Bloom et al., 2003).

Incidences of warfare are furthermore found to negatively correlate with an economy's resilience towards shrinking. Observing the conflict pattern in Ethiopia reveals that the country has been rattled by conflict for the majority of the period considered. However, if the conflicts solely falling into the definition of war are taken into account, we find a correlation with the decreasing contribution of shrinking in line with the findings of Hausmann et al. (2006). The reduction in incidence of warfare seemed to have added to the disappearance of deep slumps in GDP per capita, shifting investments in labour and capital away from destructive warfare. The 2018 pacification of the Ethiopian-Eritrean war was a major stride for decreasing the conflict potential and therefore sustaining the absence of war activity in the future, which is no longer destabilizing the overall growth performance. Other low intensity conflicts were active throughout most of the past 40 years. Especially dominant among the minor conflicts are ethnic tensions which frequently lead to fights fought by armed forces. They do not seem to impact on economic shrinking to a substantial degree as it does not involve major destruction of capital or massive killings. Still, they indicate lacking mechanisms for peaceful, unarmed conflict resolution that Rodrik (1999) finds to be essential to build up resilience towards economic shocks increasing with exposure to the world market. The issue of ethnic federalism seemingly fuelling ethnic tension and its effect on the transition towards an impersonal rule society is picked up again in the following section.

When analysing **institutional change** and its correlation with improved resilience towards shrinking, Broadberry and Wallis (2017) mainly focus on the transition from a limited access society governed by identity rule to an open access society in which rules are impersonal. The analysis aimed at capturing several implications for institutional change in the political, private, as well as economic sphere. Institutional indices suggest improvements in the transition from the Derg to the EPRDF government, as well as under the new government of Abiy Ahmed Ali since 2018. Nevertheless, Ethiopia is still considered a natural state with identity rule and limited space to form organizations outside the sphere of the ruling elite. The author argues that the transition from the Derg regime to the EPRDF government resulted in a development from a fragile to a basic natural state. Positive outcomes indicating change has

occurred are falling inequality rates as well as the fact that a large share of the population has been lifted out of poverty. The government seems to be aware of the value of an educated labour force which is displayed by the increase in public spending on education. However, the civil society and opposition parties have suffered from reoccurring repression in the aftermath of the 2005 elections. Gross capital formation has been increasing while private sector activities are still found to be closely tied to the favour of the ruling elite. Wind of change was brought by the new Abiy Ahmed Ali government in 2018. Laws under which members of the opposition and civil society had been imprisoned were repealed or renewed, a large number of prisoners were released and exiled opposition members were encouraged to return and participate in the 2020 elections. As the elections had to be postponed following restrictions over the outbreak of the COVID-19 pandemic one ought to await further evidence for the fairness of the election process and the results. A deep-rooting transformation towards an open access order has not yet occurred in Ethiopia. It remains to be proved whether the new direction of the ruling government guides the country's institutional settings towards a mature natural state and therefore potentially lays the foundations of a subsequent transition towards an open access order.

The applied *Theory of Shrinking* certainly provided a useful framework to obtain a holistic picture on Ethiopia's development process over the past four decades. However, it was developed for the analysis of how Western economies several centuries ago had gradually built up resilience towards shrinking. The reality of a developing country today is a different one. While regarded features remain important the further deepening of the interconnectedness among countries is one of the most substantial changes occurred since the 18th century. Globalization intertwines political and economic processes within a country attached to actors from around the world. Easterly et al. (1993), Hausmann et al. (2005; 2006), Jones and Olken (2008), Berg et al. (2012) and the IMF (2014) suggest that international trade impacts on the volatility of a country's growth performance. The analysis has made some adjustments to better meet the reality of a 21st-century developing country, such as taking the complexity of exports and a modern demographic transition into account. However, Ethiopia's geographical location in the conflict rattled Horn of Africa, the pressure of the international market to keep wages competitively low or the aid Ethiopia receives from international donors might hold further implications for the economy's resilience towards shrinking. Future research shall find more ways to incorporate the implications of the international market and the geopolitical environment on a country's resilience towards shrinking.

7 Conclusion

The present dissertation aimed at contributing to the newly developed strand of academic literature focusing on the disappearance of sudden halts to economic growth. In the light of Broadberry and Wallis' (2017) *Theory of shrinking*, it aimed at capturing the multi-dimensional transformation the *African Lion*, Ethiopia, has undergone since the 1980s. This was done by testing propositions on the correlation of proximate and ultimate factors with the gradual reduction of economic shrinking. The major proximate factors for the reduction of shrinking have been identified to be the stable growth of output and productivity in the agricultural sector and the reduction of incidences of warfare. They were accompanied by other factors that potentially enhanced growth, such as a beginning demographic transition and a hesitantly starting structural transformation. Other factors such as the diversification of exports and overall TFP growth are found not to be correlated with reduced shrinking and serve further potential to increase the economy's resilience towards shocks. The ultimate factor of institutional change has witnessed a large shift in the transition from the Derg regime to the rule of the EPRDF in 1991. As the authoritarian grip was loosened to some extent, the author argues that the country transitioned from a fragile to a basic natural state. The ethnic federalism that is intertwined in the structure of the state and the parties seems to not only fuel ethnic tension but impede developments of impersonal rule.

The time frame regarded was surely too narrow to undergo a deeply rooted transition towards an open access society believed to lead to a sustained resilience towards economic shrinking crucial for modern economic growth. There is no doubt that Ethiopia has witnessed substantial change since the 1980s. Its development exemplifies that institutional change does not mean strictly following an unconditional path towards a predetermined end. It means encountering unexpected strides like the pacification of the Ethiopian-Eritrean war and backlashes such as the repression of opposition and civil society following the 2005 elections. Future research should remain a curious observer of developments and their sustainability aiming to shed new light on current events. Furthermore, it ought to find new ways to incorporate the impact of globalization.

The potential of ongoing institutional change initiated by the new government, the starting structural transformation and demographic transition, as well as the recent pacification of one of the most long-lasting conflicts provide an optimistic outlook that these will continuously add to the economy's resilience towards shrinking. The awareness of the tight remaining ties between organizations and elite membership, the large remaining share of the population living in poverty and the volatile productivity growth result in a conclusion with *curbed enthusiasm* (Rodrik, 2014).

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Appendix

Table 5: Frequency of growing and shrinking on a sectoral level (author's calculations based on value added growth rate in percent of GDP provided by the World Bank (2020b))

	Agriculture		Manufacturing		Service	
	Growing	Shrinking	Growing	Shrinking	Growing	Shrinking
1980s	0.5	0.5	0.63	0.38	0.88	0.13
1990s	0.7	0.3	0.8	0.2	0.8	0.2
2000s	0.8	0.2	1	0	1	0
2010s	1	0	1	0	1	0

Table 6: Magnitude of growing and shrinking on a sectoral level (author's calculations based on value added growth rate in percent of GDP provided by the World Bank (2020b))

	Agriculture		Manufacturing		Service	
	Growing	Shrinking	Growing	Shrinking	Growing	Shrinking
1980s	12.22	-9.38	6.28	-1.64	5.42	-0.57
1990s	5.80	-4.60	8.18	-26.39	8.85	-18.09
2000s	9.67	-6.18	7.19	0	12.33	0
2010s	0	0	0	0	0	0