

# Powering Progress in Kenya

The successful implementation of Kenya's  
electrification strategy



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## Abstract

Kenya is currently on track to reach access to reliable and clean electricity for all citizens. As part of its ambitious development agenda Kenya Vision 2030, the African country's electrification strategy enabled the state to transform from one of the least electrified nations in the world to one of the most electrified states of the African continent in less than two decades. Moreover, the East African country has the unique feature of achieving these high levels of electrification in combination with high levels of renewable energy resources within their energy mix. This thesis aims to explore Kenya's successful implementation of the Kenyan National Electrification Strategy (KNES) as part of its ambitious development agenda, Kenya Vision 2030. In this thesis, the political economy of the country's energy and electrification strategy has been examined to explain how the country succeeded in reaching remarkable figures for electrification rates within a short period. Through an explaining-outcome process tracing method, this thesis concludes that the narrative of neoliberalism can sufficiently explain the successful implementation of Kenya's energy strategy implementation. By utilising neoliberal policies, the Kenyan energy sector underwent changes related to privatisation, marketisation and global market integration. These changes resulted in a rise in private investment in energy projects, primarily through Public-Private Partnerships (PPPs), leading to an increase of the electrification rate and an overall sustainable improvement of the energy sector.

**Keywords:** Kenya; Policy; Electrification; Energy; Sustainable Development; Energy Transition; International Political Economy

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## Abbreviations

BCS	Battery Charging System
EST	Environmental Sound Technologies
ERB	Electricity Regulatory Board
ERC	Energy Regulatory Commission
FIT	Feed-in tariff
GDC	Geothermal Development Company
IFI	International Financial Institutions
IEA	International Energy Agency
IMF	International Monetary Fund
IPP	Independent Power Producers
GoK	Government of Kenya
KNES	Kenyan National Electrification Strategy
KPLC	Kenya Power and Lightning Company
LCPDP	Least Cost Power Development Planning Committee
PPP	Public-Private Partnerships
PV	Photovoltaics
REC	Rural Electrification Program
SAP	Structural Adjustment Program
SSA	Sub-Saharan Africa
UN	United Nations
WTO	World Trade Organization

# 1. Introduction

“A globally competitive and prosperous Kenya” (Government of Kenya, 2008b). This statement is the overarching vision of Kenya’s long-term development plan named Kenya Vision 2030, announced by former Kenyan president Mwai Kibaki in 2008. The plan aims to transform Kenya into a “newly-industrialising, middle-income country providing a high quality of life to all its citizens in a clean and secure environment” (Government of Kenya, 2008b, p. 1). One of the main projects of Kenya Vision 2030 is the development of new and renewable energy sources available to all citizens, in line with Sustainable Development Goal 7: “Ensure access to affordable, reliable, sustainable and modern energy to all” (United Nations, 2016, p. 21). During his inauguration speech in 2022, the current Kenyan President, William Ruto, reaffirmed the nation’s commitment to achieving 100% universal access to clean energy by 2030. Ruto emphasised that the shift to clean energy would benefit local economies, generate employment opportunities, and support sustainable industrialisation (Ruto, 2022).

Considering the country’s development agenda and its objective towards renewable energy, Kenya launched the Kenyan National Electrification Strategy (KNES) in 2018. The KNES has been introduced as a fundamental pillar for obtaining universal access to clean electricity in the country by providing off-grid solutions to mainly rural communities (World Bank, 2018). As of today, the electrification strategy can be considered successful: Kenya’s electrification rate<sup>1</sup> in 2020 is 72%, up from nearly 30% in 2008, the year Kenya Vision 2030 was introduced, and currently on track to reach 100% electrification before 2030 (World Bank, 2018). Furthermore, the proportion of renewable energy in the country’s energy mix has surged from 15% in the early 2000s to 48.3% in 2015<sup>2</sup> (World Bank, 2015). Consequently, Kenya has transformed from one of the countries in Africa with the lowest electrification and renewable energy rates to one of the few on course to achieve universal access to clean electricity by 2030 (International Energy Agency, 2017; World Bank, 2018; World Bank, 2022).

While Kenya is currently on track to achieve universal access to clean electricity, energy access in other countries in the Sub-Saharan African region (hereafter Africa or SSA) is still

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<sup>1</sup> The electrification rate is the percentage of a country’s population with access to electricity.

<sup>2</sup> This percentage does not account for hydroelectric power generation, which has decreased due to drought-related disruptions in power plants. If included, the country’s renewable energy share will be 81% in 2021.

underdeveloped: The electrification rate in the SSA region is below 50%, leading to concerns by several International Organisations (IEA, 2017; World Bank, 2022). As a result of these concerns, the United Nations urged African countries in 2012 to take steps to improve their energy portfolio by facilitating private investment in clean energy as a possible solution (United Nations, 2012). At that time, the intergovernmental organisation estimated that, by 2030, roughly half of the population on the continent would still be without access to electricity (United Nations, 2012). According to more recent estimates, international organisations are expressing concerns that the current pace of progress may result in a total electrification rate of, at most, 90% by 2030 (World Bank, 2017). Of all the countries in the region, Kenya, Ghana, and Rwanda are the only ones on track to achieve a 100% electrification rate by 2030 (World Bank, 2017; IEA, 2022). However, progress towards transitioning to clean energy could be more active in the latter two, particularly in Ghana, where it ranks among the lowest. Unless the fact that Ghana and Kenya use a relatively similar energy policy mix, the share of renewables differs significantly between the two nations (Pueyo, 2018). In fact, since the discovery of oil and gas fields in 2007, fossil fuel-based power plants have become the dominant source of electricity after decades of hydropower reliance in Ghana (Energy Commission of Ghana, 2017).

The need for higher electrification rates in the SSA region has increased significantly. In the past two decades, the region has made a thriving economic performance, leading to an increase in energy demand (Schiffer, 2008; World Bank, 2019). To satisfy Africa's growth and development goals, the need for energy on the African continent will therefore increase approximately by 85% from 2010 to 2040 (Pielli et al., 2016; Mungai et al., 2022). According to the World Bank, low levels of electrification rates will lead to significant limitations on economic activities, the allocation of public services and the quality of life in general (World Bank, 2019).

In contrast to the continent's electrification rate, Africa is interestingly well-endowed with enormous potential in vast renewable energy resources because of its geographical location (Colliers & Venables, 2012; Hafner et al., 2018). Countries in the region face an advantage in renewable energy sources, namely solar, hydro, wind, geothermal, and biomass: According to recent estimates, Africa has the potential to generate 350 gigawatts (symbol: GW) of power through hydroelectricity, 110GW through wind energy, 15GW through geothermal energy, and 1000GW through solar energy (African Development Bank, 2017; IRENA, 2022). Multiple states in Africa have tried to improve their policies related to energy transition and finance to be able to

bridge the gap to achieve universal access to electricity. To be able to do so, the SSA region needs to intensify energy generation, supply and consumption through sustainable pathways (Chirambo, 2018). Currently, those pathways are untapped due to insufficient funding (Sweerts et Al., 2019; Avila et al., 2017). Nonetheless, private investment in renewable energy resources in developing countries exceeded that of developed countries in 2015 (Frankfurt School-UNEP Centre & BNEF, 2017). Despite this progress, many developing countries are still struggling to attract sufficient funding and technological competence for generation capacity in general and renewable energy resources in particular (World Bank, 2017a). This is mainly the case in the SSA region.

Private investment remains crucial for sustainable energy development despite increased climate finance from public authorities in developing countries (Hong & Karolyi, 2020). Kenya has successfully attracted private investments in the energy sector, as noted by the nations Energy Regulatory Commission (ERC), which regulates the Kenyan energy industry (ERC, 2017; Kazimierczuk, 2019). In recent years, private participation has increased significantly, particularly in major projects such as the 5000+ megawatt (symbol: MW) wind energy program, where over 70% of the investments come through the private sector (Kazimierczuk, 2019). In addition, most companies involved in present-day Independent Power Producers (IPPs) consist of international investors, primarily from Europe and the USA, who employ multilateral funding (Eberhard et al., 2016). Although national private participation is also present, these investments mainly focus on conventional, fossil-fuelled electricity generation, accounting for only 20% of the total market (Eberhard et al., 2016).

Africa's current economic and energy situation clearly shows that the continent needs a rapid and successful energy transition. Moreover, with Kenya nearing full electrification, it is interesting to examine why the country's energy policy implementation succeed, where other states in the region have failed to enable themselves to get the same level of electrification, along with a significant share of renewables in their energy portfolio. Therefore, the central research question of this thesis reads as follows:

*How can the successful implementation of Kenya's energy strategy, as outlined in its development agenda, be explained?*

Behind the research question lies an academic debate centred around the policy instruments states and state-like actors implement to reach their development objectives successfully. In the contemporary discourse within development economics, two contrasting trends are visible. On the one hand, economic nationalism and neomercantilist industrial policies have made a comeback as a growth strategy. States have become more active in domestic markets and the world economy, resulting in state capitalism (Chang & Andreoni, 2020; Helleiner, 2021; Schindler et al., 2022). While on the other hand, a tendency that mobilises private finance for development by “de-risking” investment for global investors in infrastructure, climate adaptation and healthcare, known as the Wall Street Consensus, is visible (Gabor, 2021).

The momentum of the shift towards economic nationalism has been building since the turn of the millennium, spurred by mounting criticism towards neoliberal reforms as a development paradigm and further catalysed since the 2008 financial crisis, which exposed the shortcomings of the Washington Consensus (Önis & Senses, 2005; Rodrik, 2006; Schindler et al., 2022). Industrial policy, and thus strong state intervention in the economy, based on Friedrich List’s economic mercantilism, was used as a development strategy by Japan and Germany to catch up with countries in Western Europe (Nem Singh, 2023). However, since the 1970s, the utilisation of industrial policy was rolled back in response to the Oil crisis of the 1970s. Neoliberal economists advocated for reduced state intervention, while international financial institutions promoted structural adjustment programs (SAPs) for economic growth in low- and middle-income countries (Balaam & Dillman, 2019, p. 38; Nem Singh, 2023). The structural adjustment programs are related to the Washington Consensus due to their close association with the institutions based in Washington that gave rise to these programmes: the IMF and the World Bank (Balaam & Dillman, 2019, p. 58).

Nevertheless, since the financial crisis of 2008, there has been a strong acknowledgement of the adverse effects of neoliberalism as a development strategy, and there is much critique about what the Washington Consensus has brought to the peripheral world (Önis & Senses, 2005; Rodrik, 2006; Schindler et al., 2022). This has also supported the revival of economic nationalism and industrial policy, indicating a trend towards state capitalism (Schindler et al., 2022). Furthermore, several leading economies, including the US and Germany, have recognised the importance of industrial policy once again and implemented relevant policies accordingly (Helleiner, 2021; Schindler et al., 2022). Developing countries responded by re-introducing market



regulatory mechanisms because the US implemented an expansive monetary and fiscal policy in their domestic economy (Schindler et al., 2022). Furthermore, several developing nations have introduced forms of industrial policies or have even implemented spatialised industrial strategies that are highly related to economic nationalism or even state capitalism. Examples include Saudi Arabia's Vision 2030, Thailand 4.0, Indonesia Vision 2045 and Kenya Vision 2030 (Schindler et al., 2022).

Besides the economic nationalist trend, the Wall Street Consensus by Daniella Gabor also gained an increased perspective on development economics (Gabor, 2021). The Wall Street Consensus is an emerging framework that prioritises the utilisation of private finance for development. Peripheral states are encouraged to restructure their domestic financial systems around securities and derivatives markets. Furthermore, policies are recommended to 'de-risk' investment from private investors. Under this approach, states in the global South find themselves subordinate to global financial capital, leading to significant limitations on their policy flexibility and autonomy (Gabor, 2021). These recommendations do have the very same neoliberal logic as the Washington Consensus.

The current trends within the discourse of development economics present the need for a comprehensive international political economy (IPE) analysis and explanation of the successful implementation of the electrification strategy in Kenya. Because of that, this thesis will draw upon two theoretical frameworks from the political economy literature: neomercantilism and neoliberalism. To clarify the debate in concrete policy theories, countries can experience market regulation or a form of industrial policy on behalf of economic nationalism, which is highly related to the political theory of neomercantilism (Chang, 2003; Balaam & Dillman, 2019, p. 51; Chang & Andreoni, 2020; Schindler et al., 2022). On the other hand, to facilitate the inflow of global capital, states can adopt policies associated with the political theory of neoliberalism, resulting in deregulation, privatisation and marketisation, enabling the state to meet its economic development goals (Friedman, 1962; Balaam & Dillman, 2019, p. 38; Gabor, 2021).

In that way, the theoretical perspectives from neomercantilism and neoliberalism will serve as the starting point for exploring the factors that contributed to the successful outcome of the electrification strategy in Kenya. Applying the theories of neomercantilism and neoliberalism, this thesis allows for a comprehensive examination of Kenya's development agenda. It accounts for both internal and external factors that influence the implementation of policy measures. In an

interconnected global world marked by increased interdependence, the international trade system plays a significant role in external, structural factors. At the same time, national economic policy preferences are related to internal factors that contribute to the development agenda's successful achievement.

Scholarly literature on the successful implementation of Kenya's electrification strategy has primarily taken a descriptive approach. However, there needs to be more coverage of the actual success of the energy agenda. On the other hand, the status of energy developments in the SSA region has been extensively studied by researchers such as Collier & Venables (2012), Ahlborg et al. (2015), Hafner et al. (2018), Pueyo (2018), and Mungai et al. (2022). The existing literature that has focused on specific aspects of Kenya's energy strategy has predominantly explored wind energy (Kazimierczuk, 2019), solar energy (Park, 2021) or funding and investment (Pueyo, 2018; Sweerts et al., 2019). However, a comprehensive political economy analysis of Kenya's energy strategy, examining the possible policy paradigms, is not present. While Sergi et al. (2018) have come close to examining Kenya's policy structure concerning the country's development agenda, they do not provide insights into the actual policy paradigm that contributes to the success of the energy strategy in Kenya. Therefore, this thesis aims to fill this gap by conducting a thorough analysis of Kenya's electrification strategy implementation. Moreover, this research will contribute to the existing academic discourse within the development economics field by analysing the two theories, neomercantilism and neoliberalism, in relation to sustainable development. By focusing on a country in the global South that is confronted with challenges in achieving sustainable development, the academic field will gain deeper insights into how the two distinct economic perspectives influence a state's environmental development progress.

A thorough explanation of the successful implementation of Kenya's development strategy in relation to the states' electrification and renewable energy rates holds significant societal relevance. It can provide valuable insights for other countries in the SSA region and the developing world at large, offering guidance on policy measures that can lead to a similar implementation of their own energy policy agenda. Given the growing global concerns regarding climate change and the increasing world population, countries, particularly in the global South, face economic stability, energy security and poverty challenges. The outcomes of this research can serve as a valuable resource for countries grappling with the urgent need to implement effective energy policies. Furthermore, it will shed light on the current state of the policy paradigm within global

environmental governance and highlight areas that require transformation and improvement to enable states to reach their sustainable development goals.

The thesis is outlined in four chapters. Chapter two, the first chapter after the introduction, briefly overviews the two International Political Economy theories: neomercantilism and neoliberalism. This chapter begins with a concise description of the historical backgrounds and criticisms of the theories. The second chapter clarifies the research methods employed, specifically explaining-outcome process tracing, as outlined by Beach and Pedersen (2013). The differences between the other process tracing methods will be explained as well. It concludes by defining the causal mechanisms and hypotheses that will be tested in the subsequent chapters of this thesis. To ensure a comprehensive understanding, this thesis will draw upon primary sources such as media articles and government policy papers, as well as secondary sources like academic papers for additional contextual information. The third chapter starts by providing an overview of Kenya's energy policies from 1997 to 2020, where it then proceeds to test the hypotheses deduced from the respective theories against the empirical findings. Following the empirical analysis, the final chapter presents the conclusions to the research question, followed by a discussion of the strengths and weaknesses of the theories used based on empirical analysis. Additionally, this chapter proposes new avenues for further research.

## 2. Theoretical Framework

The central aim of this thesis is to analyse the successful implementation of Kenya's electrification strategy (KNES), which forms a crucial part of its ambitious development agenda, Kenya Vision 2030. Within the realm of global environmental governance and development economics, there has been a lot of thinking around both political and economic philosophies that could shape the direction states and policymakers could undertake. As outlined in the introduction, to understand the causal mechanisms that have contributed to Kenya's proceedings in the electrification strategy, two grand theories within the international political economy spectrum will be thoroughly examined: neomercantilism and neoliberalism. This chapter will present and analyse these theories by elucidating their central concepts, assumptions, historical foundations, practices and criticism. Examining these theories will lead to the formulation of multiple hypotheses, which will be discussed in terms of their applicability to the specific case under study in Chapter 3. In the concluding paragraph of this chapter, both theories will be extensively evaluated in relation to the successful implementation of the electrification strategy.

### 2.1 Neomercantilism

Neomercantilism has its origins in classical mercantilism, which replaced the feudal economic system in Europe and was one of the earliest influential economic philosophies in history. Classical mercantilism, also known as mercantilism, focused on states' efforts to generate trade surpluses by imposing economic nationalist policies such as promoting exports and restricting imports, indicating strong government-led economic planning (Balaam & Dillman, 2019, pp. 50-51). The mercantilist policy tools that can be implemented are an adjustable set involving direct state involvement in industrialisation through public companies or more indirect methods like offering tax holidays to specific industries. Infant industry protection or economic openness may be implemented depending on the specific needs of national economic governance (Kiiza, 2007).

In mercantilist thought, the nation-state is the primary unit of analysis. In theory, the nation-state can be defined as a legal entity and a collection of institutions that govern a particular geographical region and population. From the mid-17th century onward, the state has been the primary actor in the international community due to its authority to exercise sovereignty over its territorial boundaries (Kohn, 1944; Weber, 1947). The mercantilist thought prevailed from the

sixteenth to the nineteenth centuries and was closely intertwined with the rise of the modern nation-state in Europe (Balaam & Dillman, 2019, pp. 50-51). During this period, European leaders faced the challenge of securing their nations, which led to a strong emphasis on military preparations.

Consequently, governments across Europe made significant efforts to extract income and resources to meet the growing military needs of the state (Tilly, 1985). The policies associated with economic mercantilism, also known as “Merkantilismus” in the German historical school, originated in countries that actively pursued a program of state-building or *Staatsbildung*. In these countries, it was seen as more than just an economic policy, representing a deliberate endeavour by wise and benevolent rulers to establish and strengthen the state (Cameron, 1989, p.129).

Mercantilists initiated a principled framework for analysing and prescribing economic nationalist policies, placing the state at the core of their approach, primarily focusing on gaining a trade surplus (Magnusson, 1993). Because state leaders prioritise their own state, mercantilism is often referred to as economic nationalism (Levi-Faur, 1997). The formulation of a country’s economic policies is heavily influenced by considerations of state security. Within this context, trade surpluses have been widely perceived as instrumental in strengthening a nation’s economy, thereby enhancing its security and safeguarding certain public and private groups within society. Given the absence of reliable guarantees from other states to ensure territorial security, each state must rely on its own military power for protection, which is, in turn, supported by its economy and accumulated wealth. Under these circumstances, states often adopt a zero-sum perspective that can potentially induce destabilising effects, as absolute gains achieved by one state are interpreted as absolute losses suffered by other states (Balaam & Dillman, 2019, p. 50).

An important contributor to mercantilist thought is Alexander Hamilton (1755-1804), who contended that free trade policies were not advantageous for a young nation like the United States (US) in the late 18th century (Lind, 1997). As the first Secretary of Treasury, Hamilton emphasised in his “Report on the Subject of Manufactures” (1791) to the US Congress that, given Great Britain’s global political and economic dominance at the time, the US could never compete with Britain’s matured industries without imposing import taxes (Lodge, 2005). Hamilton’s arguments highlight the mercantilist argument that a trade surplus through government measures, such as import restrictions and export subsidies, is needed to create a trade surplus and generate sufficient income for infrastructure and military investments. As a result of the success of Hamilton’s

economic nationalist policies, the US was able to build up its security and its independence from Britain and the European mainland (Balaam & Dillman, 2019, pp. 53-54).

Influenced by the success of Hamilton's mercantilist strategy, Friedrich List (1789-1846) became an even more vigorous proponent of mercantilist policies. List (1997, p. 157) argued that "the power of producing [is] infinitely more important than consuming itself", indicating that it is more important to invest in the future instead of consuming today's prosperity (Levi-Faur, 1997, p. 157). Similar to Hamilton, List argued that European and US governments should protect their infant industries "to catch up" with Britain's advanced technology and efficient labour economy. Those measures were needed to establish an equal level playing field on the international markets, a prerequisite for free trade in List's view (Levi-Faur, 1997). Instead of pursuing military and imperial objectives, List also proposed a change towards focusing on economic development as the ultimate goal. His call for targeted and temporary industry protection echoed the rise of 'neo'-mercantilism in the 19th century, as later associated with this shift (Okeke et al., 2018).

Nowadays, the perspective of neomercantilism can be applied to various contexts and circumstances, as it offers a comprehensive framework to understand a complex and interconnected world marked by increased interdependence. Especially in the era of globalisation, where states experience both growing international competition and growing interdependence, the line between domestic and international economic issues becomes increasingly blurred (Balaam & Dillman, 2019, pp. 59-61). The neomercantilist perspective regained interest in current-day economic debates and practices. Beginning in the 1970s, globalisation brought about increased economic vulnerability for states. As a result, developed countries increasingly embraced neomercantilist policies in finance, trade, and development to safeguard their domestic economies and businesses from the increased international competition, all while maintaining a commitment to freer trade under the General Agreement on Tariffs and Trade (GATT) of 1947 (Balaam & Dillman, 2019, p. 57). Governments adopt measures such as increased spending on social programs, introducing industry regulations, implementing capital controls, and manipulating interest rates. Consequently, these actions led to increased tensions between trading partners. For instance, the United States and European countries heavily subsidised farm production and utilised export subsidies to secure larger shares of export markets. Similarly, certain nations-imposed import quotas to control the volume of specific products allowed for importation. Even today, the

United States and the European Union still apply quotas on imports (Balaam & Dillman, 2019, p. 57).

Neomercantilism is closely associated with the International Relations theory of classical realism because they both involve states striving for power (Gilpin, 1987). Realism focuses on how states accumulate power and wealth to protect themselves from the influence of other states (Waltz, 1979, p. 105). Mercantilism is often seen as the predecessor of classical realism or the International Political Economy variant of realism. (Neo)mercantilism shares the ontological foundations with realism as mercantilists consider a zero-sum outlook, where gains made by one state are seen as losses for others (Cohn, 2016). The belief of neomercantilists is that cooperation is difficult to attain and sustain. Each state prioritises its own interests in a self-help system. Even if cooperation would be beneficial, both states will be concerned about the distributions of the gains and how the other might utilise their increased capabilities. This mutual insecurity makes successful cooperation reliant on coercion (Oatley, 2019). Moreover, states are aware of too much cooperation, which can make them dependent on each other (Waltz, 1979, p. 105). Neomercantilists believe that interdependence leads to mutual vulnerability and, therefore, distrust grows. Although these theories share many similarities, their primary distinction lies in their core emphasis. Classical realism centres around the state's objective of security or influence, whereas neomercantilism focuses on pursuing economic gains to acquire security and influence.

In the second half of the 20th century, neoliberalism became the dominant economic philosophy in the global political economy. This has led to a neo-imperialist structure favouring Western interests and further disadvantaged African countries (Okeke et al., 2018). This is as well emphasised by Taylor (2016), who argues that the Western push for neoliberal policies in the global South to sustain economic growth has led to more resource extraction and increased dependency, resulting in more profound inequality and further underdevelopment of the continent. More details about neoliberalism and its limitations regarding North-South relations will be extensively described in the following section of this chapter. At the start of the 21st century, many economists criticised neoliberal reforms for producing poor results or even argued that neoliberalism has failed (Önis & Senses, 2005; Rodrik, 2006; Taylor, 2016; Schindler et al., 2022). According to Chang and Andreoni (2020), the failure of the Washington Consensus resulted in the return of economic nationalist and neomercantilist debates within the development theory and praxis. This has been argued by other scholars as well (Rodrik, 2008; Stiglitz & Lin, 2013).

Moreover, as a response to the global financial crisis of 2008, the US, as the economic hegemon at the time, encouraged more monetary and fiscal policy within its economic policy, which is in line with the assumptions of (neo)mercantilism (Chang & Andreoni, 2020). These actions of the US allowed many governments to re-introduce market regulatory measures in the form of industrial policy. Furthermore, several leading economies, including the US and Germany, have recognised the importance of industrial policy once again and implemented relevant policies accordingly (Helleiner, 2021; Schindler et al., 2022). As a result, many low- and middle-income countries, especially on the African continent, implemented industrial policy as a mechanism to battle the ‘middle-income trap’ (Stiglitz et al., 2013; Noman & Stiglitz, 2015).

Industrial policy is often referred to as state planning, also known as central planning or centralisation. State planning is an economic system where the government controls and directs resource allocation, production, pricing, and distribution of goods and services through setting targets and directives for industries and sectors. These measures align with the neomercantilist thought of achieving positive trade balances and economic prosperity through the strong involvement of the government in the economy. The level of centralisation depends on the specific political impacts the state wants to employ on the economy. Thus, industrial policy made a comeback in the mid-20th century as a new development perspective after fewer market regulations in the last decades of the same century. Contemporary industrial policies include Saudi Vision 2030, Mexico’s ‘Fourth Transformation’, Thailand’s 4.0 and Kenya’s Vision 2030 (Schindler et al., 2022). Schindler et al. (2022) do even argue that these industrial development strategies are related to state capitalism.

However, as described before by Cohn (2016), (neo)mercantilism is related to realism and has a zero-sum outlook and could bring limitations to the development objectives of a state. This zero-sum outlook means that if one desired outcome is global economic growth, economic competition between states can harm global economic growth, and it is not helping in reducing economic challenges. Furthermore, according to Rodrik (2009), the neomercantilist approach can cause global economic instability resulting in trade imbalances and conflicts, which undermines the international trading system. While some countries may benefit from export-led growth, this approach can limit a state’s policy flexibility and autonomy because implemented to secure positive trade balances or sector improvements may need revision to ensure social development.



In conclusion, as an alternative development ideology to neoliberalism, neomercantilism has shown to be a possible solution for developing countries, especially within the peripheral world, to move away from the limitations of neoliberalism as a development model (Okeke et al., 2018). With neomercantilist policies, states can plan their economy in their best interests, particularly those with limited resources. This enables them to downsize international trade and focus on growing their economy domestically before expanding internationally. Therefore, implementing neomercantilist policies could be a possible explanation for successfully implementing the domestic development agenda, especially for low and middle-income countries (Kiiza, 2008; Okeke et al., 2018).

## **2.2 Neoliberalism**

Neoliberalism describes the revival of economic liberalism, a free-market capitalist philosophy that lost its dominance during the interbellum period of the 20th century. Liberalism emphasises human nature's competitive and constructive side, guided by reason rather than emotions (Dahrendorf, 1989). The roots of classical economic liberalism can be traced back to the 17th and 18th centuries, when a group of French philosophers known as physiocrats condemned government intervention in the market, believing it would harm society. Their motto, "laissez-faire, laissez-passer," which translates to "let be, let pass", was a reaction to government interventions at the time. This philosophy advocates for the government to withhold from market interference and instead leave the people of the nation alone (Balaam & Dillman, 2019, pp. 26-27).

The concept of laissez-faires, as introduced by the physiocrats, was later used by Adam Smith (1723 – 1790) as the central theme of his famous work *The Wealth of Nations*. In his work, Smith criticised the eighteenth-century mercantilist state, which believed that the state should use its power to create wealth and national security (Smith, 1937). He opposed the British Parliament for favouring the interests of wealthy landowners and trade monopolies instead of entrepreneurs and citizens in the expanding industrial centres. Smith believed that economic liberalism meant promoting individual freedom in the market, leading to efficient resource allocation and lessening the risk of government abuse of power (Smith, 1937; Balaam & Dillman, 2019, pp. 26-27). Smith believed that human nature had a cooperative and constructive side. He thought that rational individual choices lead to the common interest of society and are guided by an "invincible hand"

in the economy (Smith, 1937). Smith's ideas and beliefs gave rise to the capitalist system, which had several vital assumptions and principles. These included the coordination of society's economic activities through markets, the presence of extensive markets for the exchange of land, labour, commodities and money, the motivation of economic activity by consumer self-interest, the regulation of economic activity through competition, the freedom of individuals to start new business enterprises without state permission, and the right of individuals to private property and the income that flows from it (ibid.). To conclude, these ideas and principles suggest that the state should have a limited role in the market. Over time, liberalism has become both theory and practice bringing about significant economic and political changes to society (Balaam & Dillman, 2019, p. 27).

John Maynard Keynes (1883-1946), a UK-based journalist, became a highly influential political economist in the twentieth century. He is known for developing a nuanced form of liberalism called Keynesianism, which gained popularity from the 1930s to the early 1970s (Balaam & Dillman, 2019, p. 33). As a writer and Director of the Bank of England, among other things, Keynes challenged some of the principles of classical economic liberalism. He argued that it certainly is possible for individuals to behave irrationally and destructively for the collective result, indicating that the market's "invisible hand" can sometimes fail (Keynes, 1926). According to Keynes, the market doesn't always turn the rational and self-centred actions of individuals into a socially beneficial outcome. He believed that people tend to make unwise decisions when faced with uncertain futures and chaotic situations where sharing risks or coordinating actions is difficult (ibid.). The events of the Great Depression in the 1930s serve as an example of the consequences that can occur when individuals become fearful (Balaam & Dillman, 2019, p. 33).

Keynes suggests that during times of uncertain future income, it is wise to spend less and save more to have a financial buffer in case of need. However, if everyone follows this approach, it will result in decreased purchases, production, and employment, leading to a decline in income. Additionally, Keynes believed that the action individuals take to protect themselves from a future recession and unemployment may, in fact, contribute to its occurrence (Keynes, 1926). From this perspective, Keynes argued that governments should impose a form of market intervention to improve the economic stability of a state. During the interbellum period, the Great Depression led to various states implementing monetary and fiscal policies to increase wages and foster economic growth. Due to businesses being reluctant to invest, creating budget deficits was necessary to

stimulate production and consumption. In the United States, President Franklin Roosevelt implemented Keynesian economic policies to boost employment and social security (Balaam & Dillman, 2019, p. 34). Furthermore, Keynes is recognised for his contribution to rebuilding Western Europe after WWII and creating a new global economic order. In 1944, a meeting was held in Bretton Woods, New Hampshire, with representatives from all 44 Allied nations to create a system of embedded liberalism for managing the post-war economy. The delegates agreed to regulate international solid markets that would reflect domestic priorities (Ruggie, 1982). This led to the establishment of two new institutions: the IMF and the World Bank. Three years later, the GATT, the precursor of the WTO, was created to manage international trade (Cohn, 2016).

The economic and political ideas of Keynes became heavily criticised starting in the 1960s. US President Nixon and others attacked his ideas, especially during the Oil Crisis of the 1970s. This period was marked by stagflation, which is a combination of low economic growth and high inflation. During this time, the economic theories of Keynes were gradually replaced by those ideas of Friedrich Hayek (1899-1992) and Milton Friedman (1912-2006) (Mirowski, 2009; Balaam & Dillman, 2019, pp. 36-37). Their beliefs in orthodox liberalism prioritised capitalism and minimised the role of the state in the economy. As their ideas gained popularity, they formed the basis of a specific type of economic liberalism known as neoliberalism. During the 1980s, Margaret Thatcher, the Prime Minister of Great Britain, and Ronald Reagan, the President of the United States, implemented policies based on the theories of Hayek and Friedman. President Reagan advocated for “supply-side economics”, which suggested that reducing taxes instead of increasing government spending would encourage investment, the creation of jobs, and ultimately lead to higher economic growth (Mirowski, 2009). As a result, the highest income tax rate in the US was gradually reduced from 70% in 1980 to 33% in 1986. The belief was that tax cuts could increase the wealth of the wealthiest and that the income surplus “trickles down” to benefit the broader labour force and society as a whole (Balaam & Dillman, 2019, pp. 37-38). At that moment, neoliberals contended that the government was excessively large and controlled by influential special interest groups. They held the belief that a free-market system would allocate income to those who were the most efficient, innovative, and hardworking (Mirowski, 2009; Balaam & Dillman, 2019, p. 38).

In the 1980s, industrialised nations led by the US embraced neoliberalism and started advocating for globalisation. The purpose was to promote economic liberal principles worldwide,

aiming to boost economic growth and introduce democracy to nations that adopted this capitalist system (Steger, 2008). Globalisation has fostered international collaboration among nations, resulting in lower transaction costs, improved production efficiency, and the exchange of technologies that create employment opportunities in response to the growing demand (Balaam & Dillman, 2019, p. 39). Developed Western countries indirectly intervened in developing countries' economies by implementing neoliberal economic policies via Structural Adjustment Programs (SAPs) from the Bretton Woods institutions (IMF, World Bank), later associated with the Washington Consensus (Balaam & Dillman, 2019, p. 58). These policies included cutting spending on social programs and improving their international competitiveness, intending to help developing countries strengthen their economies. Many structuralists saw the Washington Consensus as a way for the Western Hemisphere to expand their wealth and power in a capitalist empire that was on the rise (Broad, 2002; Harvey, 2007). The Washington Consensus was organised with the belief that developing countries could benefit from global resources and market opportunities, following the example of the successful "Asian Tigers" - Hong Kong, Singapore, South Korea and Taiwan - who promoted foreign export-oriented industrialisation (EOI) to achieve late industrialisation (Balaam & Dillman, 2019, p. 291). By integrating into the global market through cooperation, underdeveloped states could become developed and reap the benefits of globalisation (Kiiza, 2008).

Globalisation has led to increased cooperation between states. However, the concept of cooperation, as seen in institutions such as the Bretton Woods Institutions (IMF, World Bank, GATT/WTO), can be better explained by the principles of neoliberal institutionalism with Robert Keohane (1984) as its leading figure. This IR theory focuses on achieving cooperation and promoting free trade, which has been the dominant force in international economic relations since the end of World War II. Liberal institutionalists believe that international institutions such as the Bretton Woods Institutions are valuable tools to address market failures and collective action problems that may arise in international economic relations. Despite challenges in an anarchic international system, states can still benefit from working together through collective benefits, absolute gains, or prospective gains (Cohn, 2016). Institutions play a crucial role in facilitating cooperation. This can be achieved through formal institutions, such as the IMF and the World Bank, and informal institutions or regimes, which are "sets of implicit or explicit principles, norms,

rules, and decision-making procedures around which actors' expectations converge” (Krasner, 1983, p. 2).

Among proponents of neoliberal thought, there is a common belief that neoliberalism fosters economic growth in developing countries. Consequently, neoliberalism is used in a sense to describe development theory or economic reform policy (Boas & Gans-Morse, 2009). Even more, in the current discourse around environmental governance, neoliberalism is widely recognised as the dominant approach (Oh, 2019). This is particularly evident in the discourse around the management of international technology cooperation, which incorporates the development and transfer of Environmental Sound Technologies (ESTs), which consistently favour pro-market and deregulatory approaches. Moreover, neoliberals believe a more liberal market approach will result in the marketised exchange of technology transfer within global environmental governance (McGee & Wenta, 2014). These ESTs will support a state to proceed with its energy developments. This orientation significantly influences the contestation between the Global North and the Global South regarding EST transfer (Oh, 2019).

At the beginning of the 21st century, Dani Rodrik (2006) pointed out that there was a decrease in political support and intellectual agreement for global neoliberal reforms, which the Washington Consensus defined. This scepticism grew as two decades (1980 and 1990) of neoliberal reforms did not lead to the desired outcome (Öniş & Şenses, 2005; Rodrik, 2006). Furthermore, in his work *The Washington Confusion*, Rodrik (2006) argues that the benefits of free trade are overestimated, with doubts about their actual impact. Furthermore, David Harvey (2007) writes in his work *A Brief History of Neoliberalism* that neoliberalism results in increased inequality, benefiting few at the expense of many. This is emphasised by his concept of “accumulation by dispassion” which highlighted global class differences. In sum, these critiques expose the shortcomings of neoliberalism, suggesting a reconsideration of its unregulated market approach for a more equitable global economy.

After the events of 2008, low- and middle-income countries struggled to fund costly development projects that did not fit their fiscal policies. Several major institutions, such as the OECD, G20, and the Asian Infrastructure Investment Bank, have attempted to mobilise private capital to bridge this funding gap (Anguelov, 2021). However, the investment in these projects remained too risky for most Northern-based investors. This resulted in a shift in the norms and rules surrounding infrastructure investment that institutionalised the distribution of risk. These

changes have been referred by Daniella Gabor (2021) as the regime of the Wall Street Consensus, characterised by the distribution of risk, reward, and responsibility of projects in low and middle-income countries to international investors. This method of 'de-risking the state' allocates risk to states, guaranteeing investors receive reasonable returns. De-risking is commonly achieved through public-private partnerships (PPPs) (Gabor, 2021). Public-private partnerships (PPPs) are defined as arrangements between when private investors and governments to finance government projects over the long term (Kazimierczuk, 2019). With the norms of the WSC into practice, Gabor (2021) critiques that Southern states are still dependent on global financial capital and significantly limit their policy space. The trend towards risk reduction in the 2020s reflects the vulnerability of low- and middle-income countries to the unpredictability and volatility of global financial capital.

### **2.3 Evaluation of the theories**

The policy recommendations that developing countries face to enhance their economic development goals include economic nationalism, liberalisation of international trade and investment, privatisation, or deregulation (Chang, 2003; Oh, 2019). Economic nationalist policies, characterised by an active role of the state in economic affairs, align with the ontological foundations and assumptions of (neo)mercantilism. On the other hand, the market-oriented policies emphasising deregulation, privatisation, and marketisation, are associated with the ideologies of neoliberalism.

In conclusion, neomercantilist policies are centred around regulations that imply a government-led trade strategy, promoting exports and limiting imports. Through the improvement of the trade balance, the state is obligated to the development of the economy and the state as the ultimate goal. Additionally, according to neomercantilist theory, the behaviour of a state is influenced by its position in the global anarchic system, as stated by Hettne, who said that economic systems cannot exist without a political framework. Therefore, these two aspects must be analysed together (Hettne, 1993, p. 24). According to mercantilists, the state is crucial in the coordination of a trade strategy.

To conclude with neoliberalism, it is essential to note that there is a difference between neoliberalism and neomercantilism in terms of the government's involvement in the economy. While neomercantilists believe in an active role of the state, neoliberals prefer a government with minimal economic involvement. They support laissez-faire policies, such as lower tax rates, and

decreased social welfare programs, allowing for easy entry of entities into the market and economic openness by promoting globalisation and cooperation. Neoliberalism is also associated with economic reforms, including removing capital controls, allowing central banks and monetary policy to operate without democratic supervision, and reducing regulations on financial industries (Okeke et al., 2018; Balaam & Dillman, 2019). As argued by Slobodian (2018) neoliberalism values economic openness and cooperation, recognising that institutions and regimes are essential in creating conditions that support cooperation.

Both neomercantilism and neoliberalism gained prominence in the late 20th century. Although they are distinct from each other, they demonstrate the interconnectedness between states due to globalisation. As countries become increasingly interconnected, they behave in different ways, all seeking their best outcome. Cooperation can be achieved, but each country will only do so based on its own terms. When a nation perceives economic aggression from another country, they tend to adopt a more defensive economic nationalist policy. This aligns with the realist perspective of the self-help system, where each nation acts in its own self-interest as like-units. However, neoliberalism prioritises distribution less than neomercantilism and makes fewer distinctions between powerful and less powerful states (Cohn, 2016).

Although there are significant differences between the two theories' perspectives on international trade, they share a common belief that trade is crucial for a country's economic development. However, the approaches for successfully implementing the energy transition differ between the two theories: one emphasises economic openness, marketisation, and cooperation. At the same time, the other focuses on defensive trade measures with an active role for the government. Despite their apparent differences, both theories consider international trade an important aspect of economic development and act based on their position in the global international system (Rostow, 1960; Kiiza, 2008). This means that the state must adjust its policies to align with the expectations of other states. Furthermore, research has shown that the energy transition process is significantly impacted by the presence of both effective institutions and supportive economic policies (Jacobsson & Lauber, 2006). It is worth noting that trade policies can vary widely between countries. The specific set of policies a particular country implements is influenced by several factors, such as its political climate, economic objectives and international trade agreements or obligations. The "Asian Tigers" is an example that shows that global market

integration, combined with defensive trade measures, can bring economic growth and, therefore, late industrialization (Kiiza, 2008; Balaam & Dillman, 2019).

Furthermore, there is an interesting debate surrounding the contemporary discourse on development economics. Since the failure of the Washington Consensus and its neoliberal reforms, low- and middle-income countries are trying to find new ways to find the right amount of funding for their infrastructure projects. These projects are highly related to industrial policy and state intervention in specific sectors, thus related to neomercantilism. These reforms do even tend towards state capitalism, as argued by Schindler et al. (2022). On the other hand, with the rise of norms from the Wall Street Consensus, states let global private capital guide their investments. However, this research examines only which policy paradigm, neomercantilism or neoliberalism, best explains the successful implementation of Kenya's energy strategy. Although Schindler et al. (2022) have linked Kenya Vision 2030 with industrial policy, this thesis takes a more neutral stance regarding this argument by not starting with the assumption that Kenya Vision 2030 is a form of strong industrial policy.

In relation to environmental governance and the implementation of sustainable development agendas, both neomercantilism and neoliberalism are considered as optional policy approaches (Boas & Gans-Morse, 2009; Okeke et al., 2018). Neomercantilism focuses on protecting a country's domestic market, keeping national resources from being exploited by international actors, mostly prominent global actors. On the other hand, neoliberal policies emphasise global market integration, which can be beneficial for the exchange of knowledge and technologies of ESTs (Balaam & Dillman, 2019, p. 39; McGee & Wenta, 2014; Oh, 2019) Furthermore, trade liberalisation also emphasises private investment, which could benefit low- and middle-income countries that may not have the financial resources to invest in sustainable energy projects and distribution. Therefore, the implementation of both neomercantilist and neoliberal policy approaches could be a possible explanation for the successful outcome of Kenya's energy development strategy.



### 3. Methodology & Operationalisation

This chapter outlines the methods employed to conduct the research, answer the research question, and test the hypotheses. The first part of this chapter will focus on the qualitative method of process tracing, which is suitable for this research question as it provides an explanation of the outcome of the case, namely the successful implementation of Kenya's electrification strategy combined with high levels of green energy. In the second part of this chapter, the theoretical concepts that stem from neomercantilism and neoliberalism will be explained and put into practice by operationalising the hypotheses. This chapter concludes with an operationalisation of the causal inference tests for the evidence that has been found.

#### **3.1 Methodology**

To be able to answer the research question, this thesis will apply the qualitative research method of process-tracing. Process-tracing is commonly used as a qualitative research tool in social science to assess possible hypotheses of causal inference. By using process-tracing, the researcher is able to deeply examine the causal inference of a single case that connects the independent variable (X) to the dependent variable (Y), through several detailed causal mechanisms. To outline the causal mechanisms within the conceptual model, each causal mechanism will be denoted as X1, X2, X3, and succeeding numerals, depending on the number of causal mechanisms. (Bennett 2010; Mahoney, 2012; Beach & Pedersen, 2013).

This more profound examination of a single case is hard to reach by applying other commonly used methods in political sciences. However, more is needed to explain the specific process that took place to come to the outcome. Process-tracing focusses on the question 'How does it work?' on the within-case level. Process-tracing opens the 'black box' between the intervention and the outcome to explain the consequences of certain events. The black box contains the causal mechanism that causes event X that leads to Y. Glennan (2002, p. 52) defines a causal mechanism as "a complex system, which produces an outcome by the interaction of a number of parts". By discovering the causal mechanisms, a deeper insight in the relation between the structural causes and effects is facilitated. Beach and Pederson (2013) state that process-tracing is the best and only method to be able to fully understand causal mechanisms and the causal processes. This eventually contributes to a higher level of validity of the theorised causal

mechanism of a single case. Moreover, internal validity is the strength of causal inferences. It refers to a more detailed and thus stronger explanation of the linkages between the causal mechanism of a specific singular case. In addition, external validity refers to the extent to which the findings can be generalised to other cases or contexts (Noble & Smith, 2015). Process-tracing generally has a high degree of validity due to its deep understanding of the causal mechanisms. However, because of its case-specific character, it is hard to generalise the research results and translate them to other cases.

Process-tracing can be separated into three different types of process-tracing. These three types are explained by Beach and Pederson (2013) as theory-testing, theory-building and explaining-outcome. All types represent a different approach to analysing the causal mechanisms between a specific cause (X) and the outcome (Y). First, theory-testing process tracing is applied when the specific cause (X) and the outcome (Y) are known and assume there is a causal link (Beach & Pedersen, 2013, p.56). In addition, there is an expectation of why X led to Y. Theory-testing process-tracing merely focuses on the verification of the proposed theory. Secondly, theory-building process-tracing is utilised when there is no clear vision of the outcome's specific cause (Beach & Pedersen, 2013, p. 60). However, it could also be that the specific cause (X) of a certain outcome (Y) is not known yet.

Both theory-testing and theory-building process-tracing are methods that aim to develop a generalisable theory. However, this is not feasible due to the focus on a single case. Theory-testing and theory-building process-tracing have not been performed in this research. However, the third type of process-tracing, explaining-outcome process-tracing, has been the focus of this research. Explaining-outcome process-tracing studies focus on explaining why the outcome (Y) happened by unfolding the causal mechanisms that are (minimally) sufficient to explain the outcome (Y) (Beach & Pedersen, 2013, p. 63). Explaining-outcome process-tracing urges for a number of actions in which the existing causal mechanisms are tested on their explanatory ability, supported by reconsiderations of previous analytical steps, until the outcome can minimally sufficiently be explained (Beach & Pedersen, 2016, p. 161).

Explaining-outcome process-tracing has been selected for this research to be able to test the causal mechanism and discover the necessity and sufficiency of these causal mechanisms. Explaining-outcome is the best suited because this thesis focuses on the outcome of the case, namely the successful implementation of Kenya's electrification strategy. Furthermore, in the case

of Kenya's electrification strategy, the outcome is already present, where it is not known which causes led to the outcome. Therefore, the explaining-outcome process tracing method is the best-suited process-tracing method for this research. However, the distinction between explaining-outcome process-tracing and the other two process-tracing methods should not be taken too strongly. The difference between those two types of process-tracing mainly relies on degree rather than a difference in kind (Beach & Pedersen, 2016, p. 157).

An assessment of whether the explanation of the outcome has reached minimal sufficiency was essential to this research. In order to reach this minimal sufficiency, the tested causal mechanism needs to be broken down into the lowest possible number of 'parts' possible that each causes the following part. However, every part should be required for the causal mechanism to be able to work. During the iterative process of explaining-outcome process-tracing the causal mechanisms are tested constantly until the outcome has reached minimal sufficiency.

### 3.1.3 Data

Before the start of the analysis, a comprehensive search for relevant sources was conducted using specific keywords and databases. Relevant documents were carefully gathered and stored, focusing on their relation to the Kenyan development agenda, including Kenya Vision 2030 and the KNES. To provide some background information, documents originating between 1997 and 2020 have been analysed. The analysis starts eleven years before the introduction of Kenya's development agenda Kenya Vision 2030, because this enables us to give some background information and pre-information about the energy status of the county. Furthermore, in the late 1990s, Kenya faced reforms in its national energy institutions, accelerating its energy expansion process. The year 2020 is the year with the latest confirming data, confirming that Kenya has achieved high levels of electrification combined with high levels of sustainable energy resources. The years after that cannot be entirely confirmed by data yet.

The data includes literature on Kenya's energy developments and the SSA region. Furthermore, the data will be supplemented with declarations from official policy statements of the Kenyan government or documents by Kenyan politicians and declarations by President William Ruto. In addition, the analysis involved the evaluation of official publications from the Kenyan government and statements made by both Kenyan and international government officials in media reports and policy briefings to identify essential moments during policy negotiations. The

international documents are mainly from the World Bank. All the documents will be extensively examined in the fourth chapter, the empirical analysis. This chapter will structure the documents in a historical chronological way. After that, the events will be analysed and reflected on the criteria of the respective hypotheses, which helps to answer the research question.

#### 3.1.4 Determining the weight of data

When conducting process-tracing analysis, it is necessary to investigate the theorised expectations to determine if they actually exist in reality and establish the presence of a causal mechanism. Besides just collecting evidence to confirm or disconfirm a hypothesis, the inferential weight of the evidence needs to be assessed to be able to make strong conclusions. This can be done through a ‘test’, whereby a series of tests lead to either the confirmation or rejection of a hypothesis (Beach & Pedersen, 2013). These tests, including the straw-in-the-wind test, hoop test, smoking gun test and doubly decisive test, determine whether the evidence can be inferred with certainty and if the tests are necessary and sufficient for that purpose. Using tests with high uniqueness can support the confirmation of a given hypothesis. This is achieved by demonstrating that a specific piece of evidence was sufficient to confirm it. The implemented tests have their own value of uniqueness and certainty based on evidence that can be necessary and sufficient. Tests with a high level of certainty can eliminate alternative hypotheses by proving that specific necessary evidence is present (Beach & Pedersen, 2013, p. 102).

The straw-in-the-wind test offers a certain degree of confidence in a hypothesis. The evidence found has a low level of uniqueness (not necessary), and gives low certainty (not sufficient) and is therefore neither necessary nor sufficient to confirm hypotheses. If the evidence that has been found passes this test, it gives the hypothesis some form of relevance. However, it may only be partially conclusive as it still allows for the possibility of supporting alternative hypotheses (Beach & Pedersen, 2013, p. 102). The hoop test, which tests if the hypothesis jumps through the hoop like a circus animal, tests if evidence has a high level of certainty and is necessary to confirm the hypotheses. This creates more confidence that the hypothesis is true and allows researchers to dismiss alternative hypotheses, thereby strengthening the validity of the hypothesis while weakening alternative ones (Beach & Pedersen, 2013, pp. 102-103).

The smoking gun test tests if the found evidence has a high level of uniqueness and is sufficient to provide substantial support for a hypothesis and considerably weakens competing

hypotheses (Beach & Pedersen, 2013, pp. 103-104). The doubly decisive test is the most robust test. If evidence passes this test, which tests for high certainty and high uniqueness, this hypothesis can be confirmed and eliminates all other competing hypotheses (Beach & Pedersen, 2013, p. 104). It must be considered that the double decisive test in social sciences is hardly achieved. Ideally, evidence that maximises both certainty and uniqueness levels needs to be found. However, since the maximisation of these levels in practice is hardly obtained, a combination of evidence that is able to pass the hoop and the smoking-gun test is therefore sufficient to come up with strong conclusions about the hypotheses. (Collier, 2011; Beach & Pedersen, 2013).

### **3.2 Hypotheses and operationalisation**

In this section, the hypotheses of the political theories of neomercantilism and neoliberalism will be introduced. Furthermore, how each hypothesis can be accepted based on their respective criteria will also be explained. Additionally, causal inference tests will be used to strengthen further the evidence that is found to be able make more informed inferences about the hypotheses.

These tests are done to evaluate how strong certain evidence is, helping to affirm or disconfirm the proposed causal mechanisms. To conduct these tests, the operationalisation from the previous paragraphs will be used to decide if the evidence is sufficient or necessary. On top of that, in examining Kenya's successful electrification strategy, one may find evidence that will not be sufficient or necessary. For example, if increased market regulation in the energy sector can be observed, does this not directly confirm the neomercantilist hypothesis, as market regulations can exist in neoliberalism. However, if strong regulations such as import tariffs or export subsidies are present, this evidence may be considered as sufficient for neomercantilist policies, because these measures are highly unique to neomercantilism. When the evidence is evaluated in the empirical analysis chapter, the found evidence will be categorised based on the 'straw-in-the-wind' tests, 'hoop' tests, and 'smoking-gun' tests.

#### 3.2.1 Neomercantilism

Based on the theoretical foundations of neomercantilism and the research question, the following hypothesis can be formulated:

H1: *The successful implementation of Kenya's energy strategy, as outlined in its development agenda, can be explained by the implementation of neomercantilist policies, which emphasises state-planned economic measures, protective trade policies, and a regulated energy market.*

The hypothesis that is derived from neomercantilism will be considered confirmed if evidence is found that fits the criteria mentioned in the hypotheses. If Kenya enhances neomercantilist policies to implement their electrification strategy, one may expect an incentive from the government to promote and support the national energy market (Magnusson, 1993). If neomercantilist measures are present, evidence needs to be found that confirms the following three criteria: state-planned economic measures, the utilisation of protective trade policies and a regulated energy market.

#### *State-planned economic measures*

State-planned economic measures or state-led planning refers to a system in which the government actively controls and directs various aspects of the economy (Schindler et al., 2022). The government's involvement relates to the control of resource allocation, production, pricing, and distribution of goods and services through setting targets and directives for industries and sectors. This has been articulated through industrial policy, spatial infrastructure planning, or other autonomous strategic strategies related to the energy sector. The empirics must show that state actors or the government of Kenya mention implementing such plans that urge the control of resource allocation, production, pricing, and distribution of goods and services. This criterion diverges from energy market regulation by only focusing on the comprehensive nature of a strategy instead of only focusing on singular laws and rules. The criteria for causal inference testing that need to be necessary is the presence of an industrial policy, in the form of a development strategy or a set of policies related to a single objective, that is highly focused on implementing policies leading to the successful implementation of the electrification rate. If a strategy exists, it must be very concrete that the contents of these strategies include strong state involvement in the economy.

#### *Protective trade policies*

Protective trade policies refer to the insertion of policy measures that protect specific infant or vulnerable sectors, for instance, the utilisation of import tariffs and export subsidies (Balaam & Dillman, 2019, pp. 50-51). In the context of the Kenyan electrification strategy, one may expect

the implementation of assertive, strategic economic policies that are in favour of the domestic energy market. This includes the implementation of tariffs and subsidies to reduce the cost of production and consumption and promote the adoption of electricity combined with renewable energy resources. Trade barriers could make the utilisation of domestic electricity resources more competitive and protect the domestic energy market. Moreover, the evidence must show that the Kenyan government provides conditions which show that the sectors benefit from the accessibility to knowledge, finance, and technologies around ESTs. These benefits must be categorised as economic incentives by gaining access to ESTs as a means of promoting economic development. The criteria for causal inference testing that need to be necessary is the presence of sector protective or supportive trade policies. If those policies exist, evidence must show that these policies do have a major impact in the improvement of the energy sector.

### *Energy market regulation*

Strong involvement of the government and governmental institutions that results in the regulation and planning of a market (Balaam & Dillman, 2019, p. 53). Market regulation indicates the utilisation of government regulations to stimulate a particular behaviour of consumers and producers to support specific industrial sectors. Additionally, the government implements policies to support sectors by imposing infrastructure development, financial support, and cooperation with industries in research and development. It also considers the existence of state-owned enterprises will be considered a form of market regulation. Concerning the energy market, one may expect the implementation of policies that reduces the costs of the distribution of electricity and the production of renewable energy and promote its adoption. In contrast with the criteria of state-planned economic measures, energy market regulation only implies the implementation of laws and rules related to the energy market. The criteria for causal inference that need to be necessary is the presence of evidence that must that state actors or the government mention the implementation of regulation that urges the distribution of electricity, as well as the involvement of state-owned energy or electricity enterprises. The level of involvement in the energy sector and its impact determines the sufficiency of the empirics.

### 3.2.2 Neoliberalism

Based on the theoretical foundations of neoliberalism and the research question, the following hypothesis can be formulated:

*H2: The successful implementation of Kenya's energy strategy, as outlined in its development agenda, can be explained by the implementation of neoliberal policies, which emphasises privatisation, marketisation and global market integration in the domestic energy market.*

The hypothesis that is derived from neoliberalism will be considered confirmed if evidence is found that fits the criteria as mentioned in the hypotheses. If Kenya enhances neoliberal policies to implement their electrification strategy, one may expect an incentive from the government to promote and support the national energy market. Suppose Kenya enhances neoliberal policies to implement their energy strategy. In that case, the following criteria are expected: the utilisation of policies resulting in privatisation and marketisation in the domestic energy market and global market integration to support the energy sector.

#### *Privatisation*

Privatisation refers to the transfer of government ownership and control of organisations, capital and management to private entities, for instance, investors or companies. Privatisation aims to promote competition and efficiency (Balaam & Dillman, 2019, p. 38). In the case of Kenya's energy market, it is expectable that the ownership of state-owned power producers, resources and capital will transfer to private entities. Privatisation in the energy market may also involve the increased investment of private entities in the energy sector. In relation to the causal inference test, to accept this criterion, it is necessary that the empirics show that the participation of private entities is encouraged by the Kenyan government. If the evidence shows that private finance has increased, this criterion will be accepted.

#### *Marketisation*

Marketisation, or deregulation of a particular market, is an economic reform that involves the reduction of government intervention and regulations with the goal of allowing market forces to determine prices and resource allocation (Van der Hoeven & Szirácski, 1997). Marketisation emphasises a business-friendly approach. In relation to Kenya's electrification strategy, to see



forms of marketisation, one may expect the removal of government regulations, barriers entering the energy sector for both national and international businesses, emphasising competition between power suppliers. Furthermore, removal from subsidies, increased market-based energy pricing, and reforms to promote renewable energy utilisation will be expected as well. On top of that, the implementation, or the increase, of Public-Private Partnerships (PPPs) in the energy market should as well be visible. In relation to the causal inference tests, these policy outcomes should be visible to let evidence pass the necessary test for this criterion. The evidence can be considered as certain if these outcomes are considered as successful by the respective resources.

### *Global market integration*

Global market integration refers to the switch from a closed economy to an economy that more actively participates in the global market (Balaam & Dillman, 2019, p. 445). This refers to global market integration because if a country emphasises trade with other states, the government tries to ‘open’ its economy. If the state tries to participate or obligates itself to international trade agreements or participate in bilateral or multilateral institutions, it could protect itself from market failures and stimulate economic growth. In relation to the energy sector, the amount of trade related to ESTs, the participation in international energy projects or trade in energy resources should have been increased. One may as well expect that Kenyan state actors or the government will reference commitments that are made with other states, trade agreements or multilateral institutions, for instance, the Bretton Woods institutions. The presence of the concepts of global market integration determines the level of uniqueness of the evidence. If the Kenyan government clearly emphasises the importance of global market integration, this improves the level of certainty the of the found evidence.

## 4. Empirical Analysis

In this chapter, the policies' implementation and decision-making process will be described, which can be used as evidence for testing the hypotheses. This chapter starts with an examination of Kenya's energy sector by giving background insights into Kenya's history regarding the country's energy portfolio. As a starting point of the analysis, the politics of Kenya will be described. After that, the energy situation's present status will be reflected. Starting from this background information, the actual process tracing will begin by exploring the historical processes that Kenya has foregone to implement its sustainable development agenda electrification strategy successfully. The found evidence is divided in two separate paragraphs based on their relevance to the two theories, neomercantilism and neoliberalism. In these two paragraphs, the evidence will be tested through the causal inference test as operationalised in the methods chapter. After the analysis, the key evidence found will be summarised, where a direct reflection is made on how the evidence relates to the operationalised criteria. This reflection is used to make arguments about the hypothesised causal mechanisms, enabling inferences to be made that help to answer the research question.

### **4.1 Background information: Kenya's energy sector**

#### **4.1.1 The Politics of Kenya**

Kenya is a unitary presidential republic in a presidential representative democratic policy framework (Kenya Law, 2010). The President will be elected through democratic voting processes every five years. The members of the Parliament will be elected based on the votes from the residents of the forty-seven counties of Kenya. The Kenyan government is comprised of the executive body, the Government of Kenya, including the National Assembly and the Senate (legislative) and the President of Kenya, the Deputy President and its Cabinet (executive). While the President hold significant executive power, the Parliament plays a crucial role in oversight and legislation. The Parliament has the authority to pass or reject legislation, which helps keep the executive branch accountable for its 'actions'. The Parliament serves as a place for discussion and decision-making on important national topics, while the President leads the executive branch in implementing policies and exercising authority.

#### 4.1.2 Kenya's present energy profile

In 2008, the development agenda Kenya Vision 2030 was launched by the former Kenyan president Mwa Kibaki. The plan aims to transform Kenya into a “newly-industrialising, middle-income country providing a high quality of life to all its citizens in a clean and secure environment” (Government of Kenya, 2008b, p. 1). Kenya Vision 2030 is centred around four pillars, namely the availability of universal healthcare, affordable housing, food security and manufacturing for all residents. The Kenyan government acknowledged that those four pillars do highly depend on affordable and reliable electricity. Thus, a strong focus on improving the electrification numbers through sustainable pathways became an essential objective in the development agenda (Government of Kenya, 2008b). In 2018 the Kenyan government further increased the importance of the accessibility of electricity and made the objective to reach universal access to affordable and clean energy by the year 2022. This objective was supported by the introduction of the Kenyan National Electrification Strategy (KNES) as part of the ambitious development agenda Kenya Vision 2030 (World Bank, 2018).

Since the introduction of the development agenda, Kenya's electrification rate has increased from 30% in 2008 to 72% in 2020. In fact, according to current estimates by the World Bank (2018), Kenya is currently on track to reach universal access before 2030. Moreover, the government of Kenya hopes, with the introduction of the KNES, to achieve universal access by the year 2022. Another goal of the development agenda is the increased utilisation of renewable energy resources. The proportion of renewable energy in the country's energy mix has surged from 15% in the early 2000s to 48.3% in 2015 (World Bank, 2015). The country has a significant share in the hydroelectric power supply, but this number has decreased in recent decades due to increased drought. In absolute numbers, the country's energy consumption raised from 57 terawatt-hour (symbol: TWh) to 97 TWh in 2019 (+70.2%) and the per capita energy generation raised from 163 kilowatt-hour (symbol: kWh) to 226 kWh in 2020 (+38.6%) since the introduction of the development agenda (Ritchie et al., 2022).

#### 4.1.3 History of Kenya's energy sector before Kenya Vision 2030

In the 20th century, the energy sector of Kenya was dominated by a centralised state-owned energy enterprise, the East African Power and Lightning Company (EAP&LC). This enterprise was accountable for generating, transmitting, and distributing electricity for the final users. After

several reforms, the company has been unbundled into two entities, the KPLC and KenGen (KPLC, 2011). The energy sector in Kenya has historically been dominated by centralised governance, which has led to a preference for grid-scale activities. This has made it easier for traditional, on-grid interventions to receive funding from landscape actors. This centralised culture in the energy sector dates back to the 20th century (Okeke et al., 2018). The existence of the state-owned energy enterprises, KLPC and KenGen, confirms the nature, as Okeke et al. (2018) stated.

For most of the 20th century, electricity generation through hydroelectric power plants was the country's primary source of electricity. The droughts during the 1990s caused severe power shortages and had a negative impact on the economy (CEPA, 2015). As a result, the costs of hydroelectric power supply have increased, which moved investors to other resources for the generation of electricity (Masyuko, 2022). Furthermore, the government introduced policies and reforms to phase out the use of hydropower plants because the hydroelectric power shortages caused harm to the country's economy (CEPA, 2015)

During the 1990s, Kenya underwent significant political and economic reforms due to pressure from aid donors. Under President Daniel Moi's leadership, the government was accused of corruption and political repression, leading to a loss of public funding. Private sector investments became more important to supplement the limited public funding. As a result, electricity supply sector reforms played a crucial role in attracting these investments (Eberhard, 2016; Newell & Phillips, 2016). The Electric Power Act of 1997 resulted in solid energy sector reforms. (KLPC, 2011). One significant change in the organisation of the state's electrification strategy at the time was the unbundling of the KPLC into two enterprises. The Kenya Electricity Generating Company (KenGen) came into existence and became accountable for power generation. The KPLC kept the function of transmitting and distributing electricity and became a publicly traded company with the government as the major shareholder (KLPC, 2019). It is important to note that KPLC is a wholesale purchaser responsible for delivering electricity to consumers (KLPC, 2011).

In 1997 the KPLC was divided into two separate entities: KenGen, a state-owned company, took charge of power generation, while KPLC retained its name and became responsible for transmitting and distributing power to the end users. The KPLC kept its name and became responsible for the transmission and distribution of power to the final users (Eberhard et al., 2016). It is noteworthy that KPLC is the wholesale buyer from all power plants and is accountable for

distributing the electricity to consumers. Those two entities are still state-owned enterprises. The unbundling and the establishment of supportive regulatory bodies have reduced conflict and created a more transparent and inclusive energy sector (Eberhard & Gratwick, 2011; USAID, 2015).

Through The Electric Power Act of 1997, the Ministry of Energy and Petroleum transferred the regulatory authority to the in 1998 newly established Electricity Regulatory Board (ERB) (Eberhard et al., 2016). In the early 2000s, the number of reforms within the energy sector and market increased significantly. Several changes were implemented in the institutions and organisations related to the energy sector. In 2004, the National Energy Policy and the Energy Act of 2006 were introduced. Several changes were made, which resulted in the creation of the Rural Electrification Authority (REA), and the restructuring of the Electricity Regulatory Board (ERB) into the Energy Regulatory Commission (ERC). This commission now oversees the entire energy sector in Kenya, as per the CEPA report of 2015. The Geothermal Development Company (GDC) and the Kenya Electricity Transmission Company (KETRACO) were also established to promote geothermal development and facilitate transmission network expansion.

Although efforts have been made to improve the sector, many Kenyan citizens were still facing the challenge of costly and inconsistent electricity supply at the time. In 2004, the National Energy Policy and the Energy Act of 2006 were introduced by the government to improve the energy sector's accessibility and reliability. These reforms aimed to restructure the sector and establish a competitive market system for electricity production, distribution, and provision. The government supported this goal (KPLC, 2011; Eberhard et al. (2016).

The Kenyan government aimed to establish a competitive market structure for generating, distributing, and supplying electricity through further reforms. (Eberhard et al., 2016). To emphasise the importance of the competitive market structure, the Kenyan government introduced Feed-in-Tariffs in 2008. This initiative was later expanded in Kenya Vision 2030 to encourage investment in the energy sector. (Government of Kenya, 2008b; Ministry of Energy, 2012).

## **4.2 Neomercantilist explanations**

### **4.2.1 State-planned energy sector**

In 2008, it was estimated that 40% of the Kenyan population lived in urban areas, and roughly 34% of Kenya's urban population lived under the poverty line (Government of Kenya, 2008b). Because of this, Kenya recognised the urgency to address the issues around its energy portfolio. Starting from that point, the Kenyan government started formulating adequate strategies and policies to improve the country's energy security, reduce its dependency on hydropower, and provide affordable and reliable electricity to meet the growing demand. They intended to diversify their energy sources and promote renewable energy development, resulting in the implementation of clean energy policy measures in their development agenda, 'Kenya Vision 2030' (Government of Kenya, 2008b). Furthermore, with the introduction of the KNES, the policies that relate to the energy market to improve the electrification rate became more concrete. The introduction of these plans indicates the presence of industrial policy, a necessary condition for accepting the neomercantilist hypothesis. However, more evidence is needed to support the hypothesis, as these policy measures must lead to higher electrification levels. Therefore, this evidence passes the hoop test, thus strengthens the neomercantilist, and weakens the neoliberal hypothesis.

### **4.2.2 Protective trade policies**

According to data from the World Bank, Kenya has historically been a net energy importer. Despite significant progress in energy generation in recent years, the country's dependence on energy imports has slightly increased (World Bank, 2018). In the mid-1990s, Kenya's net imports of energy accounted for 16% of its energy use, and in the past decade, this figure has only increased to around 18%.

Furthermore, the Kenyan government has implemented several measures to support the energy and electricity sector, including direct financing through subsidies, feed-in tariffs, and net metering (Ndiritu & Engola, 2020). The purpose of these policies is to provide investment security and market stability for renewable energy investors who supply electricity to the national grid. The government hoped that these policies would help to diversify the sources of power, generate income, and reduce greenhouse gas emissions. However, renewable energy projects have experienced significant delays due to challenges like insufficient technical expertise and inefficiencies in policy implementation (Ndiritu & Engola, 2020).

These actions indicate a desire to develop the energy market, along with regulatory measures that promote open markets in the sector. However, it is unclear whether these measures are intended to improve the energy market's competitiveness relative to other countries, or if they are intended to introduce neoliberal reforms. Additionally, there is no clear evidence that the Kenyan government has imposed tariffs on energy imports. If the country were to emphasise the competitiveness of the energy market or strongly impose import tariffs or export subsidies on energy trade, a decrease in net energy imports will be expected. However, there is no evidence that the government has directly implemented any tariffs or subsidies to encourage a decrease in net energy imports.

Although the introduction of feed-in-tariffs, net metering and subsidies are supportive market policies, there is no clear evidence that the state implements them as a form of protective trade policies. The discovered evidence does not prove any necessary or sufficient conditions to support this claim. The hypothesis of neomercantilism can still be confirmed, but the evidence of sector-supportive policies does not directly support it because these measures could also be related to neoliberal policies. Therefore, the evidence of protective trade policies used by the government could be stronger. Neither the neomercantilist nor the neoliberal hypothesis can be confirmed with this evidence. Thus, this evidence only passes the straw-in-the-wind test and gives the neomercantilist hypothesis some form of relevance.

#### 4.2.3 Energy market regulation

Throughout history, the energy market of Kenya has been dominated by state-controlled and vertically integrated entities. Because the Kenyan government more actively incentivised the electrification of rural areas, the country adopted an assertive approach towards rural electrification by emphasising grid extension. As part of the presidential campaign of former President Kenyatta, the government introduced 2014 the Last Mile Connectivity Project. It was reported that two million new grid connections were made in 2017 since the operational start of the project in 2015 (Otieno, 2017).

However, there are still market regulations that act as a constraining factor in reaching more and more people in rural areas. This is because, in Kenya, all grid and microgrid projects require some type of permit before they are allowed to operate (GIZ ProSolar, 2015). Therefore, throughout history, the energy market of Kenya has been dominated by state-controlled and

vertically integrated entities. But at the same time, the energy market underwent institutional reforms since the mid-1990s. This resulted in a more open, decentralised energy market. However, despite these forms of privatisation, the energy sector may today still be considered a highly regulated energy sector. This is because, as described in paragraph 4.1.3, the state is still the owner, or at least the major shareholder, of the two largest energy enterprises in the country, KenGen and KPLC. Furthermore, KenGen and KPLC both have a monopoly in the distribution side of the energy market. Especially KPLC, which acts as a wholesaler of all electricity in the country, has a solid governmental influence. On top of that, KPLC invested heavily in extending the grid to as many customers as possible. This could put microgrid operators in direct competition with a state-owned company that dominates the energy market. KenGen, the primary power supplier, mainly focuses on large generating units and aims to increase its capacity by 721 MW by 2020 (Sergi et al., 2018).

This evidence shows that the energy market is still a very regulated energy market, nonetheless the fact that the government tries to open the market through deregulations. Because these deregulations are not sufficient enough to accept that the energy market is not an entirely open market, the inferential weight of this evidence can only be considered as necessary, but not entirely sufficient, this piece of evidence constitutes a hoop test, which strengthens the validity of the neomercantilist hypothesis and weakens the neoliberal hypothesis.

Another piece of evidence that suggests that Kenya's energy market is a regulated energy market is that, as of today, all businesses participating in the market need a form of permit to be allowed to operate. This clearly indicates a form of market regulation. This evidence suits the criteria formulated in the operationalisation section regarding energy market regulation. The existence of market regulation is a necessary condition but is not sufficient to support the neomercantilist hypothesis. The use of permits could also be implemented as a neoliberal policy measure, making it a necessary but not sufficient form of evidence. This evidence passes the hoop test and offers some certainty in accepting the neomercantilist hypothesis.

### **4.3 Neoliberal explanations**

#### **4.3.1 Privatisation**

In 2008, The ERC has formed a committee named the Least Cost Power Development Planning Committee (LCPDP), which includes multiple stakeholders. This program was one of the policy implementations as a result of the Kenya Vision 2030 initiative by the Government of Kenya



(Eberhard et al., 2016). The objective was to improve the country by ensuring sufficient power supply at a reasonable price, with KenGen taking the lead as the primary investor in many of the initiatives. Because new finance opportunities were hardly found, KenGen invited the private sector to participate in the energy market. One of the plan's primary objectives was to create a more competitive energy market. After that period, independent power producers (IPPs) were accountable for 70 per cent of the newly installed electricity capacity. At the time, KenGen and the KPLC were still the leading players in the energy sector, despite the increasing number of IPPs present in the industry (Eberhard & Gratwick, 2011). Since the policy reforms of 2008, the interest in off-grid<sup>3</sup> energy technologies have been rising in the country (Ahlborg et al., 2015; Ondraczek, 2013). The successful privatisation of the energy sector allows the state to prioritise investments in on-grid energy while creating a favourable environment for off-grid investments (Eberhard et al., 2016). This evidence indicates that the Kenyan government invited private entities to participate in the energy market, which makes the evidence take a high level of uniqueness. However, because the state-owned entities KenGen and KPLC are still the leading in the market does indicate that the LCPDP still needs to get the right level of privatisation in the energy sector. Therefore, this evidence passes the hoop test, strengthening the neoliberal hypothesis and weakening the neomercantilist hypothesis.

The UN introduced in 2015 the 2030 Agenda for Sustainable Development, which provides a framework for peace and prosperity for people and the planet (UN, 2016). This framework consisted of 17 Sustainable Development Goals (SDGs), which included objectives for countries to implement in their national policies. SDG 7 encourages universal access to sustainable energy for all. In line with SDG 7, Kenya introduced the Kenyan National Electrification Strategy to accelerate the country's electrification process (World Bank, 2019). According to the KNES documentation, the biggest challenge in achieving complete electrification is reaching people in rural areas, particularly in the northern part of the country (World Bank, 2019). One objective to solve this issue is to distribute off-grid technologies through private companies by encouraging private investment in the energy sector (World Bank, 2019). With the utilisation of off-grid solutions, the Kenyan government hopes to reach the people in rural areas who cannot connect to the primary energy grid. This evidence indicates that the Kenyan government is willing to electrify

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<sup>3</sup> Off-grid solutions in the energy market refer to energy generation methods that are designed to generate and store electricity locally instead of making use of the main energy grid.

the rural areas through privatisation, which is consequently a necessary criterion for the neoliberal hypothesis. However, the electrification of Kenya's rural areas has not yet led to the desired outcome (World Bank, 2019). Therefore, this evidence does pass the hoop test, strengthening the neoliberal, weakening the neomercantilist hypothesis.

As mentioned before, the Kenyan energy market is historically considered a state-planned sector. However, since the mid-1990s, especially after significant influences from aid donors, the country implemented several sector reforms, whereby the energy market became more exposed to liberal market dynamics. Privatisation has been extensively practiced in the energy market by shifting the ownership of these state-owned enterprises to private entities. The partial sale of the shares of the KPLC is one part of this process that shows privatisation in the energy market. Another outcome of the privatisation of the energy companies, including KenGen and as well as KPLC, is the unbundling of the main activities towards newly formed institutions. As described by Sergi et al. (2018), the privatisation in the energy sector, enabling the market to encourage more private finance and partnership, may be considered as a success.

The decision to privatise KPLC and separate its main activities clearly indicates the government's support for neoliberal policies. Privatising the energy market is a necessary condition for the neoliberal hypothesis being confirmed. However, more evidence is needed because the government still holds a significant stake in KPLC, while KenGen is entirely state-owned. As a result, the inferential weight of this evidence can be considered as necessary, but not as sufficient. Thus, the evidence passes the hoop test, strengthens the neoliberal hypothesis, and weakens the neomercantilist hypothesis.

#### 4.3.2 Marketisation

As part of its ambitious plan to achieve universal access to electricity by 2022, the Kenyan government has implemented an investment strategy. For the initial five-year period from 2018 to 2023, the government has allocated a total investment of nearly \$2.75 billion (World Bank, 2019). To ensure sufficient financing, the Kenyan National Electrification Strategy (KNES) has emphasised the active involvement of the private sector. Within their investment plan, they anticipate that the private sector will contribute around \$500 million, while the remaining \$2 billion will be financed by the state and through donor funding. The government has established a comprehensive investment framework for Public-Private Partnerships (PPPs) to facilitate greater

private-sector participation. This framework aims to encourage private sector engagement in the electrification process (Kazimierczuk, 2019).

In order to encourage more private investments in renewable energy, the government introduced feed-in tariffs (FIT) policies (Ndiritu & Engola, 2020). The purpose of these policies is to provide investment security and market stability for renewable energy investors who supply electricity to the national grid. The government hoped that these policies would help to diversify the sources of power, generate income, and reduce greenhouse gas emissions. However, renewable energy projects have experienced significant delays due to challenges like insufficient technical expertise and inefficiencies in policy implementation. (Ndiritu & Engola, 2020).

Due to the lack of desired outcomes from initial measures in the energy sector, new reforms were implemented in 2012 (Clingendael, 2016; Eberhard et al., 2016). The Ministry of Energy in Kenya has implemented net metering to encourage citizen participation in renewable energy investments (Kenyan Ministry of Energy, 2013). The difference between net metering and feed-in tariffs is that net metering focuses on payments for power generated by individual consumers. In contrast, feed-in tariffs were invented to support renewable energy producers that deliver electricity to the national power grid. In 2016, more plans to introduce reforms in the power industry were introduced, including establishing an open market for wholesale power and further developing independent power distributors.

The implementation of the aforementioned policy measures clearly show that the Kenyan government tried to promote more private investments in renewable energy generation and electricity distribution related to marketisation. One of them is the introduction of feed-in-tariffs and net metering, whereby both businesses and consumers were obligated with subsidies to stimulate electricity generation. Furthermore, in 2016, more reforms in the power industry were introduced, including establishing an open market for wholesale power and further developing independent power producers (IPPs). The most impactful policy implementation of the Kenyan government was the increase of public-private partnerships (PPPs). The latter had even resulted in an increase from almost no private energy generation to almost 30%, according to the latest estimations.

All of the evidence related to marketisation does strongly demonstrate that the Kenyan government encouraged the involvement of marketisation in the energy sector. The evidence found around feed-in tariffs, net metering, open market wholesale power, and independent power

producers is highly related to neoliberal policy implementations. Therefore, these four pieces of evidence can be considered necessary evidence for supporting the neoliberal hypothesis. Furthermore, the positive result around these implementations reveals that the neoliberal-oriented policy can be regarded as successful. Therefore, the evidence regarding the implementation of PPPs, feed-in-tariffs, net metering, open market wholesale power and independent power producers is considered a sufficient condition for concluding that this evidence does meet the requirements for accepting the neoliberal hypothesis. Thus, this evidence passes the smoking gun test and strengthens the neoliberal hypothesis and denies the neomercantilist hypothesis to a certain degree.

#### 4.3.3 Global market integration

During the implementation of electrification policies, Kenya received significant financial assistance from international donors and engaged in trade agreements to implement its electrification policies. As mentioned in the previous paragraphs, Kenya underwent significant reforms because the Kenyan government was accused of corruption and political repression. The aid receivers had therefore urged the country to facilitate reforms. The energy sector underwent many reforms driven by pressure from global entities, mainly from the Bretton Woods institutions (Karekezi & Mutiso, 2000; Sergi et al., 2018). International donors gained significant influence in Kenya's energy sector because they are accountable for more than sixty per cent of the Ministry of Energy's budget (Kenyan National Treasury, 2020). Traditionally, the energy sector in Kenya has been dominated by state-controlled and vertically integrated entities (Okeke et al., 2018).

International funders have shaped the electricity regime by determining the allocation of development funding and, in some cases, dictating power sector reforms or structural changes. The unbundling, privatisation, and establishment of space for competitive IPPs have mainly been successful in Kenya (Eberhard & Gratwick, 2011). Furthermore, these institutional reforms included the establishment of KETRACO as a publicly owned utility and the partial privatisation of KPLC to attract even more funding from external donors (Sergi et al., 2018). In general, the unbundling of state-owned entities and the approval for IPPs, have led to an electrification generation capacity of 30% by privately owned entities in 2014 (USAID, 2015).

However, the push for privatisation in the 1990s, driven by global and multilateral pressures, led to more private sector participation in Kenya (Sergi et al., 2018; Eberhard et al.,

2016). Investors and market participants come mainly from Western countries. Especially investors from Europe and the USA do actively participate in the market as Independent Power Producers. These companies often receive funding from international and multilateral sources to support their investments in the global South (Eberhard et al. in 2016)

Furthermore, multilateral development funding, primarily from the World Bank, plays a significant role in supporting Kenya's electricity sector. While only a few projects explicitly focus on expanding electricity access or rural electrification, these objectives are sometimes included as sub-objectives within more significant projects. Development funding prioritises system strengthening, distribution of electricity, regional interconnection, and increasing electricity access. Donors such as the World Bank, European Investment Bank, African Development Bank (AfDB), AFD, JICA, the Export-Import Bank of India, and programs within the Kenyan government contribute to these projects. Currently, all projects related to increasing electricity access receive funding solely from development assistance (KLPC, 2015; Eberhard et al., 2016).

The Kenyan government does as well participate in bilateral energy projects. Japan, the USA, and Norway are among the most impactful partners (JICA, 2015; USAID, 2015; Norfund, 2017). Agencies like Japan International Cooperation Agency (JICA) and United States Agency for International Development (USAID) provide significant funding for these projects. JICA recommends the development of Community Solar Systems (CSS) to provide electricity to rural areas. USAID's Power Africa Initiative helps finance Kenya's energy grid. Norfund from Norway also contributes by organising and financing large-scale power facilities.

Furthermore, the Kenyan government has shown continued commitment financing electricity supply in rural areas through the Rural Electrification Program (REP), which is included in Kenya Vision 2030 (Government of Kenya, 2008b; Sergi et al., 2018). This has been done by assigning rural electrification agencies with the task of expanding the electric grid to reach more customers. These agencies work together with established public transmission and distribution companies and receive funding from multilateral and bilateral donors (Sergi et al., 2018). Simultaneously, the decreasing costs of off-grid and renewable energy technologies have attracted investors to seek the provision of electricity to rural communities through off-grid generation. Furthermore, several off-grid electricity start-ups have expanded into initial-access communities in the SSA region as part of a major funding project from the UK, the US and India. This funding consisted of more than \$100 million (Sergi et al., 2018).

Kenya has made significant progress towards achieving its economic and sustainable development goals through financial assistance from international donors and participation in trade agreements. The Kenyan government has received a significant amount of aid from other countries and international institutions, leading to energy market reforms in response to pressure from donor institutions. These reforms, influenced by Western institutions, are known as SAPs. As a result, Kenya has undergone policy changes under the influence of the Washington Consensus, which is highly related to neoliberal thought. Moreover, Kenya has participated in multilateral and bilateral trade agreements with the World Bank, the US, Japan, and Norway, resulting in increased private-sector participation. The presence of both domestic and international private entities has increased in recent years due to these reforms and cooperation with other institutions.

Based on the evidence mentioned above, there is a clear connection with neoliberal features. These policy measures indicate the willingness to open the energy sector to international market forces, especially by finding funding for the Rural Electrification Program. This openness is an essential requirement and serves as necessary evidence to support the neoliberal hypothesis. Furthermore, the actual engagement in international trade agreements and the implementation of reforms at the command of aid donors do indicate that the Kenyan government succeeds in global market integration, which acts as a sufficient condition for accepting the criterion. Therefore, this evidence passes the smoking gun test and strengthens the neoliberal hypothesis and denies the neomercantilist hypothesis to a certain degree.

#### **4.4 Summary of the findings**

##### **4.4.1 Neomercantilist hypothesis**

The Kenyan government has implemented various policies to reach its electrification objectives. This research tried to find a possible explanation for the successful outcome of the country's electrification strategy. One possible explanation could be the implementation of neomercantilism-related policies. Therefore, the following theoretical causal mechanism has been deployed:

*H1: The successful implementation of Kenya's energy strategy, as outlined in its development agenda, can be explained by the implementation of neomercantilist policies, which emphasises state-planned economic measures, protective trade policies, and a regulated energy market.*

From the evidence presented in the previous paragraph, the government of Kenya does not enforce protective trade policies such as export subsidies or import tariffs. Furthermore, the Kenyan energy sector has been associated with a highly regulated energy market, and as of today, the government keeps a significant stake in organising the sector. While the latter may lightly suggest the utilisation of neomercantilist policies, the empirics do instead show that the government is trying to move away from government-led economic planning in the economic sector. On top of that, the evidence related to neomercantilist thought based on the inferential weight tests shows that the hypothesis may be accepted to a small extent. Therefore, the processes that account for the change in the energy market structure showed insufficient evidence to accept the existence of the neomercantilist hypothesis.

*Table 1 - Causal Inference Test - Neomercantilism*

<i>Neomercantilism</i>	<i>Evidence</i>
<i>Straw-In-The-Wind test</i> (not necessary & not sufficient)	1. Introducing industrial planning, Kenya Vision 2030; 2. Supportive policy measures: Feed-in-Tariff and net-metering, and subsidies.
<i>Hoop test</i> (necessary but not sufficient)	1. Permit needed to operate; 2. State ownership in organisations related to power generation and distribution.
<i>Smoking-gun (sufficient but not necessary)</i>	No evidence found.

#### 4.4.2 Neoliberal hypothesis

Another possible explanation for the successful outcome of the energy strategy, as outlined in the development agenda, could be the implementation of policies that are related to the political theory of neoliberalism. Therefore, the following hypothesis has been developed:

*H2: The successful implementation of Kenya's energy strategy, as outlined in its development agenda, can be explained by the implementation of neoliberal policies, which emphasises privatisation, marketisation and global market integration in the domestic energy market.*

As summarised in the previous paragraph, evidence has shown that the Kenyan policy implementations do fit the criteria of privatisation, marketisation, and global market integration. Moreover, the evidence about public-private partnerships (PPPs) has a very strong weight for inferring this evidence. Even though the Kenyan government still has a lot of influence on the energy market through government ownership of the primary energy companies. It is evident that Kenya has undergone a rise in market liberalisation in the past few years. Therefore, based on the evidence found, the neoliberal hypothesis, *The successful implementation of Kenya’s energy strategy, as outlined in its development agenda, can be explained by the implementation of neoliberal policies, which emphasises privatisation, marketisation and global market integration in the domestic energy market* can be accepted.

Table 2 - Causal Inference Test - Neoliberalism

<b><i>Neoliberalism</i></b>	<b><i>Evidence</i></b>
<i>Straw-In-The-Wind test</i> (not necessary & not sufficient)	1. Supporting the introduction of IPPs.
<i>Hoop test</i> (necessary but not sufficient)	1. Utilising off-grid solutions; 2. Shifting ownership of state-owned organisations to private entities; 3. Introducing REP to receive more international donations.
<i>Smoking-gun (sufficient but not necessary)</i>	1. Introducing investment plan to attract more private capital through PPPs; 2. Introducing sector supportive policies: Feed-in-tariffs and net-metering; 3. Engaging in international trade agreements; 4. Donors gained more influence to push for privatisation.



## 5. Conclusion

The aim of this thesis is to explore Kenya's successful implementation of the Kenyan National Electrification Strategy (KNES) as part of its ambitious development agenda, Kenya Vision 2030. By employing an explaining-outcome process tracing analysis, this thesis tried to answer the research question: *How can the successful implementation of Kenya's energy strategy, as outlined in its development agenda, be explained?* Through this political economy analysis, an explanation for the outcome of the successful implementation of Kenya's development agenda has been found based on the political theories of neomercantilism and neoliberalism. Neomercantilism focuses on protecting a country's domestic market by imposing policies characterised by protective trade policies and a strongly regulated economy. On the other hand, neoliberal policies emphasise privatisation, marketisation, and international cooperation.

Based on the analysis and the reflection towards the hypothesis, evidence that accounts for sufficient and necessary conditions for inferring the neoliberal hypothesis has been found. While state-controlled and vertically integrated institutions have historically dominated the Kenyan energy market, the sector underwent significant changes since the introduction of its development agenda in 2008, consisting of privatisation, marketisation and global market integration. While questions remain about the state's present participation in the energy sector, the 'minimally sufficient' explanation for the outcome has been sought. The amount of evidence that was found, in combination with the strength of the evidence, gives more significant support for the neoliberal hypothesis. Furthermore, insufficient evidence has been found that accounts for the implementation of neomercantilist policies in the Kenyan energy market. Therefore, it can be concluded that the implementation of neoliberal policies offers a sufficient explanation of the successful implementation of Kenya's energy strategy.

The thesis contributes to the development literature by presenting valuable insights into the successful outcome of the country's energy strategy. These insights could apply to other countries in the SSA region and the broader developing world. It offers guidance on policy measures that can help them achieve a similar outcome in implementing their own energy policy agenda. While each country has its unique path to achieving its development goals, studying Kenya's recent decades can serve as an exemplary case. Kenya has successfully transformed from having the

lowest levels of electrification in the world to levels that exceed the global average. This achievement is particularly noteworthy when compared to other countries in the SSA region.

While this research tried to find the best answer to the research question, this thesis faced several shortcomings and limitations. First of all, this thesis should have accounted for the norms that might have been changed in relation to the sustainable development measures in the country. Social constructivists argue that climate change could be a factor in improving sustainable pathways. Therefore, future research might employ a more social constructivist approach to adequately explore the norm dynamics that could have taken place in the energy sector of Kenya. Another limitation relates to the comparison of neomercantilism incentives and neoliberalism in the context of the energy transition. The existing research literature needs to account for sufficient evidence to demonstrate the potential benefits of neomercantilism in energy transitions in general. Literature around late industrialisation and general economic development does exist, but those often need to be focussed on the energy market in particular. Further research is needed to provide a more comprehensive understanding of the advantages and disadvantages of the neomercantilist approach in environmental governance.

Reflecting on the methodology and case selection, one fundamental area for improvement was the limited access to clear policy documentation from the Kenyan government, which hindered gaining a more detailed understanding of the actual decision-making processes of the Kenyan government and its stakeholders. The access to interviews would have been beneficial in providing additional insights. Additionally, the method of explaining outcome process tracing used in the thesis has limitations, as its explanations are specific to the researched case and cannot be generalised to other cases in the region. This results in a lower level of external validity of the findings.

Alternative methods, such as content analysis, could have provided a more comprehensive understanding of the dynamics behind policy decision-making processes and implementation in the energy sector. Moreover, transformative change requires the involvement of multiple actors instead of just only the government of a state and political actors. There are actually more actors that participate on different levels, including international actors, businesses and consumers. The multi-level perspective (MLP) offers a practical conceptual framework to better understand the role of these entities in sustainability transitions. Incorporating the MLP framework could improve the analysis of the energy transition in Kenya.

In terms of research gaps, although some evidence has been presented, further research is still needed to explore the actual outcomes and mechanisms in different contexts. Investigating whether similar approaches are effective in different countries would be valuable. Furthermore, this thesis only focused on explaining how Kenya achieved its high electrification rates in the energy sector without considering alternative policy decisions and instruments. Therefore, the question of where the Kenyan energy sector would be today with a different mix of policies and instruments still needs to be answered. Moreover, this thesis only aimed to determine which policy paradigm was best suited for implementing energy sector policies. However, it fails to address whether Kenya's development strategy, Kenya Vision, is leading to increased statism or state capitalism. Nonetheless, this research could serve as a starting point for future studies related to this topic.

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