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Losers of the Abolition

Ghana's Declining Living Standards After the Slave Trade in the Early Nineteenth Century



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Abstract

Has sub-Saharan Africa always been poor or did it get poorer over time? This thesis contributes to this debate by looking at the living standard of indigenous laborers on the Gold Coast (current-day southern Ghana) in the early nineteenth century. Data on prices and wages from the Dutch colonial archives is employed to reconstruct welfare ratios of indigenous labourers, following the method by Robert Allen. This method entails calculating the annual, full-time earnings of one adult male, divided by the annual cost of maintaining a family at the minimum subsistence level. Subsequently, the results on welfare or 'subsistence' ratios are compared to previous research on welfare ratios in the eighteenth and late nineteenth century. The data indicates that although the living standard of labourers was low in the 1830s, it was not exceptionally low in international perspective. In contrast, the Gold Coast was relatively on par with East Asian and South American living standards and not far behind southern Europe. However, this study has found that living standards were much lower than in previous and later centuries. A major factor was the slave trade. By the time it was abolished in 1807, the economy of the Gold Coast had become too dependent on it. The abolition caused trade to decline and domestic slavery to rise, putting a downward pressure on wages. Only when Britain slowly extended its domain over the entire Gold Coast did living standards start to rise. The British abolished domestic slavery and brought peace and stability to an otherwise violent region, ushering in a period of unprecedented growth for the Gold Coast.

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Introduction

Currently, sub-Saharan Africa is the poorest region in the world. Influential scholars like Daron Acemoglu and James Robinson have argued that this is nothing new and that Africa has always mired in poverty.¹ They argue that the effects of the slave trade and extractive colonial institutions have been persistent on the economic underdevelopment of Africa until today. However, according to Gareth Austin, linking two periods of time without analysing the changes that happen in between could oversimplify the causation and lead to a “compression of history”.² The history of Ghana shows that the progression of living standards in Africa was far from a linear process, since the country was economically faring better than most of its Asian counterparts at the turn of the twentieth century.³ This trajectory of agricultural growth eventually stagnated when Ghana’s cocoa industry was destroyed due to endemic crop-diseases in the 1940’s. The collapse of international cocoa prices after the first oil crisis led to further decline in the 1970’s and political instability caused by post-colonial struggles in neighbouring African countries worsened the economic crisis in Ghana.⁴ Nevertheless, welfare in Ghana remained at par with Japan until the 1960’s. Despite its location in the poorest region of the world, Ghana currently enjoys a stable political situation and even has one of the fastest-growing economies of Africa.⁵ Thus, in order to research the long-term effects of slave trade and colonialism on Ghana’s economy and avoid a compression of history, it is necessary to empirically analyse the historical progression of welfare in Ghana. Additionally, studying Ghana’s economic history adds to our knowledge on the origins of Ghana’s economic development and can help us understand the processes by which regions grow and decay.

In recent years, several scholars of Ghana’s economic history demonstrated that historical living standards were much higher than previously thought. In the pre-colonial Gold Coast region (current-day southern Ghana), Klas Rönnbäck argues that free indigenous workers of the British holdings on the Gold Coast were in reality quite well off compared to many other parts of the world, including parts of Europe and Asia.⁶ In the period Rönnbäck analyses, namely 1670 to 1760, he finds that these living standards subsequently deteriorate, as there was a ‘guns-for-slaves’ pattern to the trade: when the British had guns

¹ Daron Acemoglu and James A. Robinson, ‘Why is Africa poor?’, *Economic history of developing regions* 25.1 (2010), 21-50.

² Gareth Austin, ‘The reversal of fortune thesis and the compression of history: perspectives from African and comparative economic history’, *Journal of International Development: The Journal of the Development Studies Association* 20.8 (2008), 996-1027.

³ Ewout Frankema and Marlous Van Waijenburg, ‘Structural impediments to African growth? New evidence from real wages in British Africa, 1880–1965’ *The Journal of Economic History* 72.4 (2012), 895-926, there 921.

⁴ Ewout Frankema and Marlous van Waijenburg, ‘Africa rising? A historical perspective’, *African Affairs* 117.469 (2018), 543-568, there 557.

⁵ *Ibidem*, 558.

⁶ Klas Rönnbäck, *Labour and living standards in pre-colonial West Africa: The case of the Gold Coast* (Routledge 2015) 198.

to sell, these were primarily traded for slaves. However, it is relatively unknown how living standards on the Gold Coast further developed into the nineteenth century. The only research on this time-period is by Gareth Austin, Joerg Baten and Bas van Leeuwen, who use anthropometric evidence to measure the biological living standard of Africans that were recruited into the Dutch army from 1800 to 1849. The authors find that the Africans were similar in height to southern Europeans, although their height development deteriorated strongly in the 1840s.⁷ Although anthropometric evidence could be useful, potential selection biases regarding the use of military recruits to measure general welfare make it less convincing to study historical welfare levels than a study based on real wages of unskilled labourers. The only study on real wages in the nineteenth century is by Ewout Frankema and Marlous Waijenburg, who reconstruct and compare wages in nine British African colonies from 1880 to 1965.⁸ Similar to Rönnbäck, they argue that living standards on the Gold Coast were relatively high in global comparison, especially in the twentieth century. As is noticeable, there is a lack of research on the period between 1760 and 1880, even though this is a period of profound economic change for West Africa due to the abolition of the slave trade and the transition from chartered trading companies to direct colonial rule. The focus of this thesis is therefore on this period.

Thus, the research question of this thesis will be: *How did the living standard of labourers on the Gold Coast in the early nineteenth century develop, in comparison with labourers in the eighteenth and late nineteenth century?* This thesis also aims to answer the question why the living standards might have changed over time by looking at the abolition of slave trade and the transition from a period of chartered trading companies to a period of direct colonial rule. The method on living standards in colonial West-Africa will be quantitatively studied by calculating welfare ratios, following Robert Allen.⁹ The thesis will focus on the Dutch possessions in the Gold Coast region (current-day Ghana) in the nineteenth century until the purchase of these possessions by Britain in 1872. The data on wages in this period is limited. Yet for the time-period in the middle of the studies on living standards by Rönnbäck, Frankema and Van Waijenburg, the 1830s, the collected data is well-suited for a fairly representative view of living standards in this period.

By analysing the development of living standards on the Gold Coast, this study could make a contribution to neo-institutionalist theory. Gareth Austin has argued the necessity of the neo-institutionalist approach in African economic history, as there is a large emphasis on the long-term negative impact of the external slave trade.¹⁰ This theoretical approach argues that institutions have a close relationship with socio-economic development. The absence of private property rights for a large

⁷ Gareth Austin, Joerg Baten and Bas van Leeuwen, 'The biological standard of living in early nineteenth-century West Africa: new anthropometric evidence for northern Ghana and Burkina Faso 1', *The Economic History Review* 65.4 (2012) 1280-1302, there 1299.

⁸ Frankema and Van Waijenburg, 'Structural impediments to African growth?'

⁹ Robert C. Allen, 'The great divergence in European wages and prices from the Middle Ages to the First World War', *Explorations in economic history* 38.4 (2001), 411-447, there 428.

¹⁰ Gareth Austin, *Labour, Land and Capital in Ghana: From Slavery to Free Labour in Asante, 1807-1956* (Rochester 2005) 27-33.

part of the population due to slavery could be such an institution that has had a negative impact on living standards. Furthermore, slave trade could have undermined key social institutions by undermining economic exchange between peoples or fostering the development of authoritarian regimes.¹¹ To assess the long-term impact of slave trade, quantitative research regarding the development of living standards over time could create a benchmark against which to compare later developments. By 1814, the slave trade was abolished by both the British Empire and the Netherlands, although slavery itself was still legal. With neo-institutionalist theory in mind, we could hypothesize that the abolition had a positive impact on the development of key capitalist institutions such as a functioning market economy or private property rights to land, which might have resulted in higher living standards on the Gold Coast. Thus, studying the economic history of Ghana is relevant as it could add to understanding the long-term impact of the slave trade.

The long-term impact of historical events is closely related to the theory of path dependency, which in the case of Ghana assumes that the ‘development of its underdevelopment’ has been more or less inevitable.¹² One of the most influential African dependency theorists is Walter Rodney, who has argued that African domestic development was undermined by the European slave trade.¹³ According to Rodney, this underdevelopment laid the foundation for European colonialism in the nineteenth century, which further underdeveloped Africa. However, dependency theory is not without critics, as some have argued that the “notion of dependency is used in such a diffuse way as to be tautological.”¹⁴ This thesis can contribute to this debate as it will not only study the long-term impact of slave trade, but the impact of the transition from the rule of chartered companies to direct colonial rule as well. With the end of these companies around the turn of the nineteenth century, their territories reverted to the rule of their respective sovereign states. This transition marked the end of the *ancien régime* and the beginning of a new era of colonialism for the British and Dutch colonial empires, with colonialism moving away from Company rule toward a more bureaucratic and socially interventionist system.¹⁵ According to path dependency theory, we could state that this transition merely represented a further reinforcement of extractive colonial institutions, which had a negative impact on living standards on the Gold Coast. This research can help resolve the controversy surrounding the significance of path dependency theory.

To be able to study living standards on the Gold Coast and compare them to living standards across time, this thesis will use the method by Robert Allen on so-called ‘welfare ratios’.¹⁶ His method entails calculating the ratio of wages that are earned in a year, relative to the yearly cost of a subsistence

¹¹ Warren Whatley and Rob Gillezeau, ‘The impact of the transatlantic slave trade on ethnic stratification in Africa’, *American Economic Review* 101.3 (2011), 571-576.

¹² Walter Rodney, *How Europe Underdeveloped Africa* (Washington DC 1982).

¹³ Rönnbäck, *Labour and living standards*, 3.

¹⁴ Antony G. Hopkins, ‘On Importing André Gunder Frank into Africa’, *African Economic History Review* (1975), 13–21, there 16.

¹⁵ Julia Adams, ‘Principals and agents, colonialists and company men: The decay of colonial control in the Dutch East Indies’, *American sociological review* (1996), 12-28, there 13.

¹⁶ Allen, ‘The great divergence in European wages’.

basket of goods which is necessary to support a family. The real wages of labourers employed by the Dutch colonial government will be calculated using the method by Allen on financial data from the 'Dutch Possessions on the Coast of Guinea' archive in the Hague.¹⁷ In the research, the focus will be on indigenous labourers, both skilled, unskilled, free and slave. Subsequently, their wages will be converted from guilders into grams of silver, in order to make them suitable for comparison to international wages. Next, the calculation on a subsistence basket of goods will be based on the prices of the main food staples produced and consumed in the region, mainly corn, yams and palm oil.¹⁸ The annual wage of a labourer divided by the annual cost of a family subsistence basket results in welfare ratios. These will then be compared to research on welfare ratios on the British Gold Coast in the eighteenth and late nineteenth century. This way, the consequences of slave trade, its abolition, and the impact of the transition to colonialism on the development of living standards throughout the century can be analysed.

Thus, this thesis will proceed as follows: in the first chapter, the historiography on the Gold Coast will be analysed. The second chapter will look at the context of living standards on the Gold Coast in the early nineteenth century. In the third chapter, the source material on wages and prices will be analysed and the method to calculate welfare ratios explained. In the fourth chapter, the results of the research will be presented and analysed. In the fifth chapter, the results will be placed in a larger context by comparing them to data on living standards across time and focussing on the explanatory variables. The thesis will end with a final conclusion.

¹⁷ Nationaal Archief, Den Haag, Nederlandse Bezittingen op de Kust van Guinea, nummer toegang 1.05.14.

¹⁸ Klas Rönnbäck, 'Living standards on the pre-colonial Gold Coast: a quantitative estimate of African labourers' welfare ratios', *European Review of Economic History* 18.2 (2014), 185-202, there 189.

1. Historical Living Standards on the Gold Coast

In this chapter, the focus will be on the historiography of Ghana's economic history, in particular on the development of living standards in the period when it was still called the Gold Coast. In the introduction it was mentioned that the history of Africa's poverty is still a controversial topic, with some scholars arguing that Africa was historically not especially poor. An analysis of previous research on the development of living standards on the Gold Coast is necessary to understand this controversy. This would not only highlight any gaps in the historiography on this topic, but also shows the relevance of research on historical living standards.

Pre-Colonial Living Standards

The pre-colonial economic history of sub-Saharan Africa is difficult to study due to the lack of primary sources, but fortunately the Gold Coast has quite a large amount of both qualitative and quantitative evidence about living standards due to its early discovery by the Portuguese. As mentioned in the introduction, Klas Rönnbäck has studied living standards on the Gold Coast in what he calls the 'pre-colonial period', since European colonial dominance was still limited to the forts along the coast.¹⁹ Rönnbäck uses records from the British Royal African Company (RAC), and its successor to reconstruct the living standards of the indigenous African population before and during the peak of the Atlantic slave trade on the Gold Coast, in particular the period from 1699 to 1760. The most important finding by Rönnbäck, at least in the context of this thesis, is that his quantitative evidence suggests that living standards on the Gold Coast in the eighteenth century might have been quite high in international comparison. By calculating the subsistence ratio for unskilled labourers, Rönnbäck has found that this ratio was higher than, or on par with, those in other parts of the world such as Asia or Latin America. At the same time, qualitative evidence suggests that most local households held relatively few material possessions. More than cheap European textiles do not seem to have reached the market of consumers. Any economic surplus seem to have been turned to various other uses, such as supporting a large family.²⁰

One of the most important debates regarding African economic history is the question whether African societies were slave societies or whether any free labour existed that could be employed if an employer so wished. According to Rönnbäck, his research has shown that free, hired labour was not difficult to find. He admits this could be because he has only studied certain European enclaves, but also emphasizes the fact that the English Companies had no difficulty to employ labourers in many coastal towns along the Gold Coast. Rönnbäck mentions that sometimes European companies even had to compete with African agents who wanted to employ local workers. However, according to Rönnbäck,

¹⁹ Rönnbäck, *Labour and Living Standards*, 11.

²⁰ *Ibidem*, 182.

the existence of a market of free labour was dependent on the socio-economic context of the Gold Coast. When the slave trade started to expand in the course of the seventeenth century, domestic slavery seems to have expanded with it. This led to an influx of refugees who put a downward pressure on wages paid to the free labourers on the Gold Coast. Thus, working for wages might have become less attractive over time, which shows that the development of a factor market for labour on the Gold Coast was far from a straightforward process.²¹

The research by Rönnbäck adds to the literature on the impact of the slave trade, as Rönnbäck finds that the slave trade had large repercussions for the people of the Gold Coast. Naturally for the people who were enslaved, but also for the rest of the population due to the ‘guns-for-slaves’ pattern to the trade: when the British had guns to sell, these were primarily traded for slaves. Subsequently, these guns were further used in wars of regional tribes and kingdoms, which led to an even greater supply of slaves. Key African collaborators, such as interpreters, merchant princes and local rulers, could earn high incomes from their participation in the slave trade. However, as has been mentioned, the wages of labourers on the Gold Coast deteriorated substantially as the slave trade expanded. Not only due to the influx of refugees, but also because the English started to train ‘castle slaves’ as skilled craftsmen, who slowly began replacing freely employed labourers.²²

Rönnbäck’s research shows that the Gold Coast was not always poor, but it became poorer over time. Rönnbäck admits that one should be cautious to use his case study to generalize about the living standards of West African societies, let alone the whole African continent. However, it does show that the historical poverty of Africa is more nuanced than previously thought. Rönnbäck supports this argument by suggesting that the Gold Coast was not very unique and had a material culture comparable to other African peoples along the West African coastline. As the slaves were sold by African chiefs in exchange for guns, these chiefs could then go to war even more. Consequently, in the wars that followed more people were made slaves. Thus, the welfare of the people on the Gold Coast deteriorated during the peak of the Transatlantic slave trade, not only from the trade itself, but for a large part from the increased warfare in which it resulted.²³

These conclusions from Rönnbäck’s research provide some important perspectives from which the living standards in the nineteenth century can be analysed. First, it has to be studied how living standards compared internationally in the early nineteenth century. This could add to the debate on the underdevelopment of Africa and the question whether Africa has always been poor. Second, researching the early nineteenth century could shed more light on the influence of the slave trade on living standards, as the abolition of the slave trade after 1807 could have resulted in less warfare on the Gold Coast and, consequently, in higher living standards for the indigenous population. Third, it has to be analysed

²¹ *Ibidem*, 180.

²² *Ibidem*, 183.

²³ *Ibidem*, 184.

whether a factor market for free labour developed in the nineteenth century or if the colonial rulers were dependent on slave labour. The following chapters will address these questions in more detail.

Living Standards on the British Gold Coast 1880-1965

Similar to research on the Gold Coast in the eighteenth century, research on living standards in the nineteenth century is quite limited. Frankema and Van Waijenburg are two of the few scholars who attempt to reconstruct living standards on the Gold Coast in this period as they compare the living standards in nine British colonies in West and East Africa between 1880 and 1965. In measuring the welfare ratios of the different African colonies, the authors looked at urban unskilled wages and urban retail prices in each colony's capital city. In the case of the Gold Coast this was the city of Accra, which is still Ghana's capital. The authors find that the living standards in the West African colonies and Mauritius were surprisingly high, especially in comparison with their East African counterparts. Compared to the living standards in major East Asian cities at the time, the material living standards of West African urban dwellers were even two to three times as high. The living standards increased in all African countries during the entire colonial period that Frankema and Van Waijenburg studied, with only a short drop during the First and Second World Wars. Although other West African colonies had higher welfare ratios than the Gold Coast in the 1880's and 1890's, the Gold Coast started to surpass them in the 1920's and thereafter.²⁴

According to Frankema and Van Waijenburg, the main reason for the relatively high African living standards seem to be the high land-labour ratios and access to open lands. This is an integral part of the Nieboer-Domar hypothesis, which states that slavery was a vital alternative to boost production in cases of land abundance and labour shortages.²⁵ After slavery was abolished during the colonial era, a high demand in urban labour increased wages. Meanwhile, the abundance of land kept prices for agricultural commodities low as food production easily matched demographic growth.²⁶ However, this does not explain why the living standards in West African colonies were so much higher compared to their East African counterparts. Frankema and Van Waijenburg name the early trade relationship of West Africa with European powers as one of the main reasons, as the colonies in West Africa were under British control for more than a century before the British developed a foothold in East Africa. Consequently, West African societies had already completed the transition from being based on the prohibited slave trade towards legitimate trade by the 1880s, while the Arab slave trades still dominated international exchange in East Africa until the start of the twentieth century. Thus, the precolonial differences in commercial development between West and East Africa meant that a market for free labour already existed in West Africa. This determined the institutional design of the emerging colonial

²⁴ Frankema and Van Waijenburg, 'Structural impediments to African growth?', 910.

²⁵ Erik Green, 'The economics of slavery in the eighteenth-century Cape Colony: Revising the Nieboer-Domar Hypothesis', *International Review of Social History* 59.1 (2014), 39-70, there 40.

²⁶ *Ibidem*, 911.

states. West African colonial governments had more relaxed *laissez-faire* policies, while in East Africa there was a more direct intervention in the labour market to fix labour shortages.²⁷

For the majority of people living in the hinterlands of the Gold Coast at a large distance from urban commercial centres it was the size of cattle or harvest, rather than wages and retail prices, which determined their economic standing. However, even for these people living standards on the Gold Coast grew rapidly in the twentieth century, which is accredited to the blooming cocoa industry in the country. The authors focus on urban wages, but their research shows that workers on cocoa plantations on the Gold Coast earned nearly the same wage as their urban counterparts.²⁸ This indicates that living standards in the countryside were relatively high as well. Thus, high land-labour ratios combined with agricultural growth were of paramount importance in the rise of living standards on the Gold Coast.

Biological Living Standards in the Early Nineteenth Century

So far, no research has been done on welfare ratios on the Gold Coast in the early nineteenth century. Only anthropometric data gives an indication of living standards in this period. The height of West African military recruits that were born between the 1800s and 1840s and sent to the Dutch East Indies show that living standards were higher than previously thought. The African men were recruited at the town of Elmina along the coast, but they mostly came from current-day northern Ghana and Burkina Faso. These areas were not part of the Gold Coast at the time, which only comprised the coastal area in current-day southern Ghana. The recruits averaged about 3 cm taller than the average height of slaves in the 1810's, which would indicate a small degree of selection bias of army recruits. However, when the authors correct possible height biases, the data shows that both West African soldiers and slaves were similar in height to southern Europeans. The Africans were notably shorter than north western Europeans, but overall the difference in height between Europeans and Africans was much less than the difference we observe today.²⁹ This started to change in the 1840s, when the height development of the recruits strongly declined. The authors do not give an explanation, but hypothesize that there might be a correlation with many major famines around the world in this period.

Thus, a clear gap exists in research on the Gold Coast in the early nineteenth century. Not only were most of the recruits from territories outside of the Gold Coast, but it is also debatable if the living standard of military recruits can be construed as representative for whole region. Still, the data is useful as it gives an indicator of the living standard of West Africans at the time. Additionally, this thesis could contribute to the question why the living standard of the recruits declined during the 1840s and analyse whether a similar decline occurred among unskilled labourers along the coast.

²⁷ Ibidem, 921.

²⁸ Ibidem, 903

²⁹ Austin, Baten, and Van Leeuwen, 'The biological standard of living', 1299-1300.

Research gap

The lack of research on the early nineteenth century shows a clear gap in the historiography, which problematizes research on long-term developments in African economic history. If we wish to avoid the ‘compression of history’ Austin warns against, this gap must be filled.³⁰ By analysing the welfare ratio of labourers in the early nineteenth century in comparison to other periods, we could analyse the long-term development of living standards in Ghana. However, to make this comparison possible, the welfare ratios must be reconstructed in a similar matter to the research on living standards in other periods. Therefore, the next chapter will deal with the context of wage labour and subsistence needs on the Gold Coast, after which the methodology on welfare ratios will be explained in chapter three.

³⁰ Austin, ‘The reversal of fortune thesis and the compression of history’.

2. Slavery, Conflict and Colonialism in the Gold Coast Economy

The period between 1807 and 1872 was a period of profound change for the Gold Coast. Until then, contact with Europe had limited itself to trade, mainly in slaves, on the coast with chartered companies. This changed during the nineteenth century, when conflicts between the coastal Fante and the inland kingdom of Ashanti caused the British to come to the aid of their Fante allies. This allowed Britain to slowly expand its influence beyond its forts and most coastal towns came under British control, except for a few Dutch and Danish holdings. Meanwhile, the abolition of the slave trade meant that both the European powers and the local population had to look for other ways to make a profit. These political developments had important consequences for the economy of the Gold Coast and the living standards of its people. Therefore, this chapter will examine these changes, which helps to better understand the context of the Gold Coast in the nineteenth century. Most importantly, it provides guidance on which factors must be taken into account when analysing the source material on labour, wages and goods on the Gold Coast in the following chapters.

Economy

The economy of the Gold Coast was largely based on agriculture in the nineteenth century. An analysis of this agricultural economy does not only provide us with knowledge on the economic status of the Gold Coast, but it also tells us more about the consumption patterns of its people. As a consumer basket of goods is part of the methodology on welfare ratios, it is necessary to know what it may have looked like on the Gold Coast. The most commonly produced goods on the Gold Coast were beans, yams, cassava, palm oil and corn such as maize. Maize was introduced in the area around Elmina by the Portuguese as early as the fifteenth century. It was thus known as *burro* or *aburro*, derivations from the Portuguese word for maize *milhio zaburro*.³¹ In the centuries thereafter it slowly became one of the main food staples on the Gold Coast. Even in the Ashanti heartland, cleared and cultivated landscapes that produced maize had been achieved by 1820.³² Another widely consumed crop on the Gold Coast was yam. However, this was a long-maturing, labour-intensive root crop which made it more of a prestige food than a common staple. Furthermore, yams were more suited to the savannah of current-day northern Ghana, so a large portion of this crop was probably imported from a distant hinterland.³³

Although also used for consumption, palm oil was the agricultural product that was most produced for export on the Gold Coast. The indigenous palm oil was harvested in the forests quite close

³¹ James McCann, 'Maize and grace: history, corn, and Africa's new landscapes, 1500–1999', *Comparative Studies in Society and History* 43.2 (2001), 246-272, there 251.

³² *Ibidem*, 258.

³³ *Ibidem*, 257

to the urban settlements along the coast, especially the area around Accra.³⁴ Palm oil became increasingly important to the economy of the Gold Coast after the abolition of the slave trade and in 1853 replaced ivory and gold dust as the leading item of export.³⁵ This caused a monetisation in the economy, a clearer division of labour and a wider dispersion of people benefiting from international trade. However, the further inclusion in international trade also caused a dependency on imported European goods the local industry could not compete with.³⁶

The heavy reliance on agriculture in West Africa was caused by the high land-labour ratio in the region, which could have militated against contracting for land and free labour. According to the Nieboer-Domar hypothesis, when land was abundantly available, the population was scarce and large-scale economies were absent, the incentives for a person to sell his or her labour power were greatly reduced. Landowners were therefore required to employ coercive measures to expand production, such as relying on slavery.³⁷ Nonetheless, a high land-labour ratio could have had a positive impact on living standards, since structural poverty resulting from a lack of access to land would have been unlikely on the Gold Coast.³⁸ The Nieboer-Domar hypothesis could explain the prevalence of slavery on the Gold Coast, although it is relatively unknown whether the high land-labour ratio meant that everyone had access to these lands. Local rulers or kinship structures could have prohibited people from owning land.³⁹ Only at the end of the nineteenth century did land rights become more commercialized in West Africa, due to growth of export markets for agricultural commodities such as palm oil.⁴⁰

Politics

In the early nineteenth century, the only remaining European nations on the Gold Coast were the Dutch, British and Danish. Previously, these factions were represented on the Gold Coast through the rule of chartered companies, but this changed when their possessions on the Gold Coast came under the direct colonial rule of the motherland at the turn of the nineteenth century. The power of the Europeans limited itself to a number of forts and factories that were built by the companies next to urban settlements along the coast. To promote trade, the British allied themselves with the Fante tribes that lived along the coast, while the Dutch were allied with the Ashanti kingdom, located in what is now central-Ghana. Britain slowly expanded its colony in the course of the nineteenth century. It purchased the few Danish possessions that were left in 1850 and extended its control beyond the borders of their forts. The expansive drift of the Ashanti kingdom brought it into conflict with the Fante allies of Britain, which

³⁴ James Sanders, 'Palm oil production on the Gold Coast in the aftermath of the slave trade: a case study of the Fante', *The International Journal of African Historical Studies* 15.1 (1982), 49-63, there 57.

³⁵ Edward Reynolds, 'Agricultural adjustments on the Gold Coast after the end of the slave trade, 1807-1874', *Agricultural History* 47.4 (1973), 308-318, there 308.

³⁶ Sanders, 'Palm oil production on the Gold Coast', 63.

³⁷ Gareth Austin, 'Factor markets in Nieboer conditions: pre-colonial West Africa, c. 1500-c. 1900', *Continuity and Change* 24.1 (2009), 23-53, there 23.

³⁸ John Iliffe, *The African poor: A history* (Cambridge University Press 1987) 4.

³⁹ Rönnbäck, 'Living standards on the pre-colonial Gold Coast', 187.

⁴⁰ Austin, Factor markets in Nieboer conditions, 34-35.

led to a series of conflicts and wars between the British and Ashanti in the course of the nineteenth century.⁴¹ To consolidate their colonies and produce more coherent areas of influence, the Netherlands and Britain had a trade of forts in 1868. However, this led to a conflict between the Dutch and the Fante population that occupied the areas around their newly obtained forts, who were unhappy with the alliance between the Dutch and the Ashanti. This conflict was the final straw for the Dutch, who did not want to spend any more time and effort on their unprofitable colony. They decided to sell their possessions to Britain in 1872, after which the entire Gold Coast became a British Crown Colony.⁴²

The headquarters of the Netherlands on the Gold Coast was located at fort St George in Elmina, a city with some fifteen to twenty thousand inhabitants in the middle of the nineteenth century.⁴³ Most archival material used in this study stems from the Dutch headquarters at Elmina. It must be noted that although the Dutch had two fortresses at Elmina, the city was never under their direct control. Political power of the city lay in the hands of seven *asafo* (wards), while its government was constituted by a king. The city had strong relations with the Ashanti, which ultimately led to its destruction by the British in 1873.⁴⁴ Table 2.1 gives an overview of all Dutch possessions on the Gold Coast in the nineteenth century, excluding the British forts of the 1868 trade.⁴⁵

⁴¹ Larry W. Yarak, 'Elmina and Greater Asante in the nineteenth century', *Africa* 56.1 (1986), 33-52, there 41.

⁴² *Ibidem*, 45-46.

⁴³ Larry W. Yarak, 'West African coastal slavery in the nineteenth century: the case of the Afro-European slaveowners of Elmina', *Ethnohistory* (1989) 44-60, there 44.

⁴⁴ Larry W. Yarak, 'A West African cosmopolis: Elmina (Ghana) in the nineteenth century', *seascapes, littoral cultures, and trans-oceanic exchanges, library of congress, Washington DC* (2003).

⁴⁵ Michel Doortmont and Jinna Smit. *Sources for the Mutual History of Ghana and the Netherlands : An Annotated Guide to the Dutch Archives Relating to Ghana and West Africa in the Nationaal Archief, 1593-1960s* (BRILL 2007), 325.

Table 2.1 Dutch possessions on the Gold Coast 1807-1868

Fortress	Place in Ghana	Period in possession	Comment
Fort St George	Elmina	1637-1872	Dutch headquarters
Fort Coenraadsburg	Elmina	1637-1872	Built to protect Fort St George
Fort Batenstein	Butri	1598-1872	
Fort Dorothea	Accoda	1687-1872	
Fort Orange	Sekondi	1642-1872	
Fort St Anthony	Axim	1642-1872	
Fort San Sebastian	Shama	1640-1872	
Fort Vredenburg	Kommenda	1682-1872	
Fort Witsen	Takoradi	1665-1872	
Fort Hollandia	Princess Town	1724-1872	Abandoned in 1815
Fort Amsterdam	Kormantin	1665-1868	Destroyed in 1811 by Akan tribes
Fort Crevecoeur	Accra	1642-1868	
Fort Goede Hoop	Senya Beraku	1667-1868	
Fort Lijdzaamheid	Apam	1697-1868	Destroyed in 1811 by Akan tribes
Fort Nassau	Moree	1598-1868	

Source: Michel Doortmont and Jinna Smit. *Sources for the Mutual History of Ghana and the Netherlands : An Annotated Guide to the Dutch Archives Relating to Ghana and West Africa in the Nationaal Archief, 1593-1960s*.

Slave trade

The slave trade dominated the relationship between the Gold Coast and the Europeans in the eighteenth century. However, this changed in the nineteenth century when the British Empire ended the slave trade after abolitionist pressure in 1807. This immediately made approximately ninety percent of the existing trade on the Gold Coast illegal.⁴⁶ As the British controlled most Dutch colonies around the Atlantic at this time because of the Napoleonic wars, this virtually meant the end of the Dutch slave trade as well. Subsequently, British pressure on the Netherlands to end the slave trade in return for its captured colonies led to the Anglo-Dutch Treaty of 1814.⁴⁷ With this treaty came an end to almost two hundred years of Dutch slave trading, in which approximately 550.000 to 600.000 Africans were shipped to the Americas.⁴⁸ The immediate effect of the abolition can be seen in Graph 2.1, with the exception of some illegal slave trading in the decades thereafter.

⁴⁶ Reynolds, 'Agricultural adjustments on the Gold Coast', 308.

⁴⁷ Kenneth Morgan, *A Short History of Transatlantic Slavery* (Bloomsbury Publishing 2016), 131-132.

⁴⁸ Ineke van Kessel, 'Gijs van der Ham, met een voorwoord door Kofi Annan, Dof goud. Nederland en Ghana, 1593-1872' (2014) 2.



Economic initiatives

Due to the end of the slave trade, the Dutch had to find new ways to make a profit from their possessions on the Gold Coast. This proved to be harder than they thought. The colonial government tried to establish a plantation colony and efforts were made to open gold mines, but due to a lack of manpower and high mortality rates these attempts ultimately failed.⁴⁹ The only relatively successful endeavour by the Dutch in this period was the recruitment of African men into the Dutch East Indian Army. The Dutch government assumed that Africans would be better equipped to deal with the tropical climate than European recruits and used to a tough life under harsh conditions.⁵⁰ Between the years 1831-1842 and 1855-1872, more than three thousand African recruits were employed by the Dutch colonial government to fight in the Dutch East Indies.⁵¹ Although initially, the Dutch colonial government urgently stated that recruitment had to be voluntarily, this changed when volunteers failed to apply. Eventually, the Dutch commander on the Gold Coast even started to buy slaves himself and signed them up for service in the East Indies. The Dutch government in the Hague did not have any problems with these practices, but to the British this was in direct violation of the Anglo-Dutch Treaty of 1814.⁵² Nevertheless, the Dutch continued with the recruitment of slaves or former slaves and even signed an agreement with the Ashanti king for a steady supply of recruits in exchange for guns.⁵³ These practices continued until the sale of the Dutch possessions in 1872.

⁴⁹ Cornelis Nagtglas, *Een woord aangaande de vraag: "Wat moet Nederland doen met zijne bezittingen ter kust van Guinea?"* (The Hague 1863), 6-7.

⁵⁰ Ineke van Kessel, *Merchants, missionaries & migrants: 300 years of Dutch-Ghanaian relations* (2002), 133.

⁵¹ Ineke van Kessel, *Zwarte Hollanders: Afrikaanse soldaten in Nederlands-Indië* (Singel Uitgeverijen 2013), 44.

⁵² *Ibidem*, 57.

⁵³ *Ibidem*, 75.

Slavery and free labour

The end of the Transatlantic slave trade did not indicate the end of the institution of slavery on the Gold Coast. Whether a factor market for free labour developed throughout the nineteenth century is up for discussion, but the fact remains that slavery continued to play an important role in the Gold Coast economy. Some scholars have even argued that the abolition of slave trade led to a significant expansion of African slavery. As the abolition resulted in a drop in the price of slaves, slaves became widely available to the African buyer. Subsequently, slave plantations started to develop in coastal areas that produced goods for the African market and for export.⁵⁴ A seemingly deliberate attempt was made by the British to try and reduce the central role of slavery within Gold Coast society in preparation for the introduction of capitalism and wage labour, but failed to transform dependency relationships for a majority of slave owners and slaves before 1874.⁵⁵ This was no different in the town of Elmina. Larry W. Yarak studied notarial documents from Elmina in this period and he found that the employment of slaves was widespread in Elmina and dramatically increased in the period following the abolition of slave trade and the decline in the prices of slaves. Still, a slave in Elmina was not the same as a slave in the Americas and as Yarak has noted, “slavery was but one form of involuntary servitude in the Elmina social order; the slave did not stand in sharp contrast to the free person.”⁵⁶ In Elmina, slaves had rights and in some instances even started legal cases against their masters if they felt aggrieved.⁵⁷

The prevalence of slavery in Elmina does not indicate that it was the only form of labour that was available. The ancient tradition of ‘pawning’ was quite widespread on the Gold Coast, which involved handing over a person or thing as a form of collateral for the duration of a loan. This resulted in a form of debt slavery, although the main difference with slavery was that a pawn could not be sold and was freed when the debt was paid.⁵⁸ Other than pawning, free labour was available as well. The British often employed free labourers who received their pay in goods at the end of the eighteenth century. This was no more than that of an ordinary slave, although the free labourers did receive some goods in advance.⁵⁹ The same seems to have applied to the case of Elmina, where there was a sizeable class of free but poor commoners. Many of these free commoners were employed on a large scale to serve as canoemen, so they could fulfil the transportation and communication needs of the Dutch.⁶⁰ Unfortunately, no individual wage data is available on these canoemen, although the evidence shows that plenty of freemen were employed by the Dutch as, among others, sawyers, masons, carpenters and

⁵⁴ Patrick Manning, ‘Contours of slavery and social change in Africa’, *The American Historical Review* 88.4 (1983), 835-857, there 853.

⁵⁵ Trevor R. Getz, *Slavery and reform in West Africa: Toward emancipation in nineteenth-century Senegal and the Gold Coast* (Ohio University Press 2004), 54.

⁵⁶ Yarak, ‘West African coastal slavery’, 54.

⁵⁷ *Ibidem*, 53.

⁵⁸ *Ibidem*, 57.

⁵⁹ Ty M. Reese, ‘Facilitating the slave trade: company slaves at Cape Coast Castle, 1750–1807’, *Slavery and Abolition* 31.3 (2010), 363-377, there 368.

⁶⁰ Harvey M. Feinberg, ‘Africans and Europeans in West Africa: Elminans and Dutchmen on the Gold Coast during the eighteenth century’, *Transactions of the American philosophical society* 79.7 (1989), 1-186, there 68.

painters.⁶¹ The majority of labourers in Elmina were slaves, but the market for free labour seems to have been large enough to employ a relatively significant amount of free labour.

Conclusion

This chapter has shown that there are many factors that must be taken into account when reconstructing welfare ratios on the Gold Coast. An analysis of the agricultural economy of the Gold Coast indicates that the consumption pattern of its inhabitants consisted of widely produced goods such as yam, maize and palm oil. Furthermore, we can conclude that the early nineteenth century was a period of relative economic obscurity for the Gold Coast. Due to the abolition of the slave trade, the role of the Gold Coast in the global market was greatly reduced. Economic initiatives by the Europeans such as the establishment of a plantation economy mostly ended in failure. A small exception is the recruitment of Africans for the Dutch colonial army, although this would not have had much of an effect on overall living standards. On the contrary, since the abolition caused domestic slavery to become widely available to the African buyer, this probably would have reduced living standards as Rönnbäck has shown in the previous chapter. Research on welfare ratios could clarify this. Therefore, the next chapter will first explain the method and sources on constructing welfare ratios.

⁶¹ Nationaal Archief, Den Haag, Nederlandse Bezittingen op de Kust van Guinea, nummer toegang 1.05.14, inventarisnummer 961.

3. Sources and Methodology

In this chapter, the methodology and sources used to reconstruct welfare ratios will be explained, in comparison to the methodology used by Rönnbäck, Frankema and Van Waijenburg. As mentioned in the introduction, this is the method originally developed by Robert Allen. This method entails calculating the total amount of wages earned in a year by a single male breadwinner, relative to the annual cost of a subsistence basket of goods that can support a family of six people. This results in a welfare ratio or ‘subsistence ratio’, as a welfare ratio of 1,0 is just enough to keep a family at the minimum subsistence level. First, this chapter will explain what an African subsistence basket of goods may have looked like, after which the use of wage data will be explained.

The subsistence basket of goods

The studies by Rönnbäck, Frankema and Van Waijenburg both use the method of Robert Allen to reconstruct welfare ratios. However, there is a big difference in how the welfare ratios were calculated between the two studies, as Rönnbäck has revised the calorie and protein requirements per capita upwards compared to Frankema and Van Waijenburg. The research by Frankema and Van Waijenburg is in accordance with Allen’s original assumption that the consumer basket of one adult male exists of a consumption of 1941 calories and 43 grams of protein, which multiplied by three would be able to feed a family of five. However, Allen has later admitted that this estimate is too low to feed an entire family.⁶² Rönnbäck applies these new findings by taking into account a consumer basket of 2250 calories and 56 grams of protein, which is multiplied by four to feed a family of six. This thesis mainly uses Rönnbäck’s revised method, but will follow Allen’s older method when comparing welfare ratios internationally and over time.

The consumer basket of goods is based on locally produced goods on the Gold Coast and historical studies on consumption patterns on the Gold Coast. The basket contains just enough proteins and calories for daily survival, along with some other necessities such as cloth and fuel. As data on expenditures of the average household on the Gold Coast in the early nineteenth century is unavailable, certain assumptions must be made as to how this basket must have looked. As mentioned in the previous chapter, most of the population on the Gold Coast worked in the agricultural sector. Due to the great variety of African consumption patterns and the common practice of crop rotation, commodity substitution bias poses a genuine concern. Nonetheless, maize had become the main staple on the Gold Coast, and will thus form the main crop in the basket. Alongside maize, the basket will contain meat, yams, palm oil, soap, cotton, candles and fuel like firewood. Other than the differences in calorie and protein consumption, this basket is similar to the baskets used by Rönnbäck, Frankema and Van

⁶² Robert C. Allen, *Poverty lines in history, theory, and current international practice* (Oxford 2013) 3.

Waijenburg. The main difference is that Rönnbäck includes data on yams, while Frankema and Van Waijenburg have data on sugar. As data on sugar cannot be found in the Dutch archives, the basket used in this thesis will contain yams, which the evidence shows as being quite prevalent on the Gold Coast.⁶³ Thus, an average subsistence basket of goods in the early nineteenth century on the Gold Coast must have looked something like the one that can be found in Table 3.1.

Table 3.1 Gold Coast subsistence basket of goods based on the annual consumption of one individual at Elmina

	Quantity (annual consumption)	Calories (kcal, daily intake)	Protein (grams, daily intake)
Maize	200 kg	2000	52
Meat	3 kg	10	2
Palm oil	3,25 kg	79	0
Yams	50 kg	162	2
Soap	1,3 kg		
Cotton	1/3 piece		
Candles	2,6 kg		
Fuel	2 MBTU		
<i>Total</i>		2251	56

Source: Table based on NL-HaNA, Kust van Guinea, 1.05.14 and the works of Klas Rönnbäck, 'Living standards on the pre-colonial Gold Coast: a quantitative estimate of African labourers welfare ratios' and Ewout Frankema and Marlous Van Waijenburg, 'Structural impediments to African growth? New evidence from real wages in British Africa, 1880–1965'.

To value these commodities, the prices are mostly based on the sales and purchases of the local *vendumeester* (auctioneer), of Elmina's bookkeeper and on price data from the studies by Rönnbäck, Frankema and Van Waijenburg. The total price of the basket is subsequently raised by 12,5 percent, comprising 5 percent for housing and 7,5 percent for fuel. Additional considerations and explanations on the calculation of the price of a consumer basket of goods can be found in the Appendix.

Wages

Wage data of indigenous labourers on the Dutch Gold Coast has been gathered for the years 1835 to 1838. Unfortunately, except for the wages of a few skilled slave labourers in 1839 and 1840, wage data from other years in the nineteenth century is unavailable.⁶⁴ The exception is wage data of military recruits. These recruits earned 0,21 guilders per day, which is about the same as the average skilled slave

⁶³ Nationaal Archief, Den Haag, Nederlandse Bezittingen op de Kust van Guinea, nummer toegang 1.05.14, inventarisnummer 1065.

⁶⁴ Nationaal Archief, Den Haag, Nederlandse Bezittingen op de Kust van Guinea, nummer toegang 1.05.14, inventarisnummer 1141.

labourer, but this is not the focus of this study.⁶⁵ Nevertheless, the period from 1835 to 1838 is of importance as it is in the middle of the period of direct colonial rule by the Dutch on the Gold Coast. Additionally, it is right in between the periods that Rönnbäck, Frankema and Van Waijenburg have studied.

The aim of this study is to look at living standards of the indigenous population and therefore, wage data from European labourers has been omitted. Nevertheless, an international comparison will be made to see how the living standard of labourers on the Gold Coast related to that of labourers across the globe. The list of labourers studied includes, among others, smiths, masons, carpenters, henchmen, painters, sawyers, assistants, and workers. These occupations have been divided into skilled and unskilled labourers to be able to compare them to other studies on welfare ratios. In the archives there is data on the income of women as well. This data has been excluded in the reconstruction of welfare ratios in this period, but the gender wage gap will be analysed to estimate the contribution of women to a household. Although adult male wages do not equal total household income, this is necessary to maintain both international comparability and comparability of living standards on the Gold Coast over time.

In addition to excluding the income of any women or children, it is possible that labourers earned extra income in the form of gifts or working outside of set hours. Additionally, it could be possible that the Dutch paid for at least some of the food of the labourers as well. The evidence shows that in the case of the African recruitment depot, large sums of food were paid for by the colonial administration.⁶⁶ One could assume that at least some of this food went to the common African soldiers as well. However, no evidence can be found that the same applied to the common labourers. Since the issue is unclear, this study will present welfare ratios both with and without the assumption that the labourers were also fed by the Dutch colonial regime, in addition to the wages paid to them.

As we have concluded from the previous chapter, slavery was still widespread on the Gold Coast in the 1830's. The Dutch colonial administration had long owned slaves which it trained in various artisan occupations. In fact, a major use of slaves in this period was as skilled artisans or labourers.⁶⁷ The use of slaves is evident in the source material as some labourers have *vrijneger* added next to their occupation in parentheses, which explicitly classifies them as being free. It is therefore assumed in this study that the remainder of labourers were slaves or pawns. As has been mentioned in chapter two, pawns were not much different from slave labourers. Therefore, to prevent overcomplication, these labourers will be classified as slaves. Although presumably the living standard of slaves and pawns was lower than that of free labourers, both data sets are used to reconstruct welfare ratios due to the limited availability of wage data in the early nineteenth century. The implications of using wage data of slaves and the differences between free and slave labourers will be discussed in the next chapter.

⁶⁵ Kessel, *Zwarte Hollanders*, 45.

⁶⁶ NL-HaNA, Kust van Guinea, 1.05.14, inv.nr. 1065.

⁶⁷ Yarak, 'West African coastal slavery', 50.

The focus in this study is on urban labourers, which is of importance to maintain continuity and international comparability to other studies on the living standard of urban labourers. Most archival material is from Elmina, so we can assume that the wages studied were from urban labourers. However, even if the labourers were working at any of the other Dutch possessions, these were almost exclusively located in or around a coastal town, as the Dutch did not have any possessions inland. We can therefore assume these were urban labourers, which makes them comparable to wage data by Rönnbäck, Frankema and Van Waijenburg. The only exception seems to be a man named 'Etteroe', who is classified as a 'Ferrier of the River Pru', a river in the inland of the Gold Coast near Ashanti.⁶⁸ His wage data has therefore not been included in the overall results, but the fact that he earned the least out of all labourers seems to indicate that wages were higher along the coast.

Even though the focus is on urban wages paid by the Dutch government, we can assume that these wages were fairly representative for the entire region. The urban-rural wage gap is mostly depended on the rural-urban mobility of the labour force. Although there are few in-depth historical studies on this topic, labour migration might have been relatively high. The movement of large groups of people has always been of great importance in Africa due to nomadic herding, but the end of the nineteenth century also saw a large-scale increase of individual migration as colonial powers started extending their domains.⁶⁹ Even in the sixteenth and seventeenth centuries, labour mobility along the Gold Coast might have been quite high due to the growth of coastal towns and the advantage of opportunities for wealth accumulation.⁷⁰ The high labour mobility in addition to the high land-labour ratio in the region and it can be argued that the reservation wage for free labourers was quite high in the early nineteenth century. Thus, without overgeneralizing, the evidence suggests that the living standard of labourers in coastal towns might have been representative to the Gold Coast region as a whole.

Conclusion

This chapter has explained the method on how to calculate welfare ratios in relation to the research by Rönnbäck, Frankema and Van Waijenburg. This thesis will use the revised method by Rönnbäck, but it will still be possible to make a comparison with the works of Frankema, Van Waijenburg and any other previous research by using the original methodology of Allen. Based on the source material from the Dutch archives and through realistic assumptions and considerations, we were able to calculate welfare ratios for the years between 1835 and 1838. These results will be presented and analysed in the next chapter. Any other considerations regarding the methodology that have not been covered in this chapter, can be found in the Appendix.

⁶⁸ NL-HaNA, Kust van Guinea, 1.05.14, inv.nr. 961, scan 262-263.

⁶⁹ John C. Caldwell, *African rural-urban migration: the movement to Ghana's towns* (Australian National University Press 1969), 201.

⁷⁰ Rebecca Shumway, *The Fante and the transatlantic slave trade* (Boydell & Brewer 2014), 21.

4. Results and Analysis

With the collected data on the prices of food, cloth and other goods on the Gold Coast, in relation to the data on wages of indigenous labourers employed by the Dutch, welfare ratios have been calculated using the revised method by Robert Allen as explained in chapter three. First, this chapter will analyse the considerations that would lead to lower or higher welfare ratios. Subsequently, the results of the research will be presented and it will be discussed what the source material tells us about living standards in the region. The chapter will end with a comparison between living standards on the Gold Coast to living standards elsewhere in the world at the time.

Living standards on the Gold Coast 1835-1838

As explained in chapter three, a 'subsistence ratio' equals the annual, full-time earnings of one adult male, divided by the annual cost of maintaining a family at the minimum subsistence level. In the evidence, the monthly wage of a labourer is nominally valued in guilders. This is subsequently multiplied by twelve to calculate the annual earnings in guilders of one adult male. The cost of living on the Gold Coast is based on the cost of a subsistence basket of goods for one adult male as specified in Table 3.1. The value of a subsistence basket is nominally measured in guilders as well, based on the prices of local consumer goods. It is assumed that the annual cost of maintaining a family of six is equal to four times the subsistence basket for one adult male. Thus, if the subsistence ratio of a male labourer is 1,0, this indicates that a male labourer earned just enough to keep his family at the minimum subsistence level. Subsistence ratios greater than one indicate that a family could use the surplus to expand consumption to more luxurious items. Ratios less than one suggest that the family faced serious economic difficulties. However, before the exact results on welfare ratios are presented, the following section will first present the results on wages and consumption that could impact the welfare ratios

Wages

Welfare ratios do not hold into account any additional conditions, such as a household's own food production or the income of female and child labour. If a welfare ratio is below one, this therefore does not necessarily entail that a family lived below the subsistence level. The evidence supports this argument as it shows that the Dutch employed indigenous women on the Gold Coast quite often.⁷¹ The wages a *werkvrouw* (female worker) earned in comparison to a *werkman* (male worker) can be found in Table 4.1. The wage gap between free male and female labourers – the gender wage gap - is quite substantial; free female labourers only earned about two thirds of their male counterparts. Surprisingly enough, female slaves earned more than their male counterparts and far more than free female workers.

⁷¹ NL-HaNA, Kust van Guinea, 1.05.14, inv.nr. 961.

It is unknown why as their exact activities are not listed, but it could indicate that women contributed significantly to the income of a household on the Gold Coast. If the wages of female workers are taken into account, and assuming that slaves and freemen did not marry with one another, this would increase the welfare ratio of an unskilled free labourer by about 70 percent and that of a slave labourer by more than double. The welfare ratio of a free labourer would still be lower, but it is unknown if any of the male labourers had an additional income. Although this would have been unlikely for the slave labourers, it is a genuine possibility for the labourers that were employed on a free basis.

Table 4.1 Wages in guilders of unskilled male/female workers Dutch Gold Coast, 1830s

Workers	Monthly wage
Female	f 3,16
Free	f 2,33
Slave	f 3,75
Male	f 3,33
Free	f 3,33
Slave	f 3,33
Total average	f 3,22

Source: Nationaal Archief, Den Haag, Nederlandse Bezittingen op de Kust van Guinea, nummer toegang 1.05.14, inventarisnummer 961.

Table 4.1 shows that both slave and free *workers* earned the same, but if the wages of other unskilled occupations are taken into account, slave labourers earned even more than free labourers. This can be seen in Table 4.2. As an employer also had to pay money to purchase a slave, it would seem irrational to use slaves. According to Akosua Perbi, slaves performed many of the same tasks as free men and women, but they were required to work harder.⁷² One of the core incentives for using slaves in West Africa could therefore have been to increase the length of a working day. According to Rönnbäck, slaves must have worked about 25 percent longer hours than free labourers before it would be worthwhile for an employer to invest in slaves. We can use the same calculation by Rönnbäck to estimate if slave labourers employed by the Dutch also worked longer hours.⁷³ This calculation uses the purchase price of a slave and the average annual wage of both slave and free labourers, to calculate how much more time a slave must have worked in order to justify the capital investment of purchasing a slave. Table 4.2 shows that a male slave employed by the Dutch must at least have worked about 22 percent longer hours for it to be a worthwhile investment. This is roughly the same estimate as Rönnbäck. This indicates that free labourers presumably did not work all day, which means that they might have worked additional jobs or perhaps used this time to go fishing. In both cases, the living standard of a free labourer would rise significantly.

⁷² Akosua Perbi, 'Slavery and the slave trade in pre-colonial Africa', *Retrieved April 5 (2001)*, 11.

⁷³ Rönnbäck, 'Living standards on the pre-colonial Gold Coast', 197

Table 4.2 The cost of purchasing a male slave versus hiring a free labourer, 1830s

A. Purchase price of an adult, male slave	f 40,00
B. Purchase price of slave including discounting of capital cost (10% per year)	f 63,75
C. Annual mean wage of unskilled slave labourer	f 39,36
D. Annual cost of unskilled slave labourer (=C + B/10)	f 45,73
E. Annual mean wage of unskilled free labourer	f 37,56
F. Cost ratio (slave/free labourer=D/E)	122%

Note: A discount rate for capital of 10 percent per year is assumed. It is furthermore assumed that a slave is exploited for a period of 10 years on average.

Sources: Data for the purchase of a slave (A) from Yarak, 'West African coastal slavery in the nineteenth century' (1989). Annual wages paid to slaves and free labourers (C and E) from NL-HaNA, Kust van Guinea, 1.05.14, inv.nr. 961. Assumptions and calculation from Rönnbäck, *Labour and Living Standards* (2015).

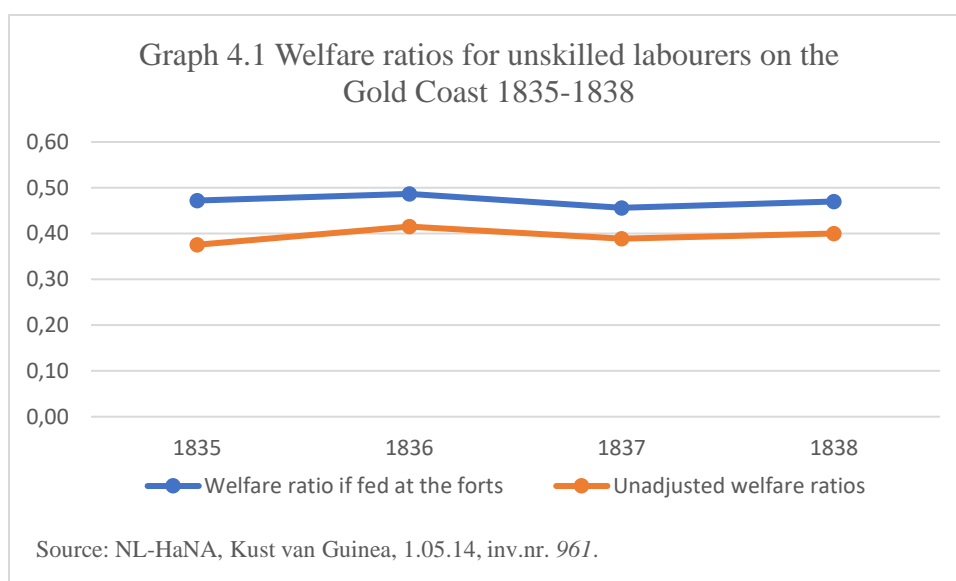
Consumption

As was discussed in chapter three, it is unclear if the labourers were fed by the Dutch colonial regime in addition to the wages paid to them. Some evidence can be found that the soldiers at the recruitment facility in Elmina were fed by the colonial regime. It could have been possible that this food was only meant for the European soldiers, but the purchase of large sums of food by the *menagemeester* seems to indicate that some of this food must have gone to the African recruits as well.⁷⁴ In at least one instance it has been recorded that an Elmina slaveowner allowed her slaves to work on their own plots for three days in the week, so they could grow maize and yams for own consumption.⁷⁵ Graph 4.1 gives an indication of what impact differences in consumption may have had on the welfare ratios of unskilled labourers. This is assuming either that they were only paid their wages and nothing else (unadjusted welfare ratio) or that the Dutch also paid for the food of the labourer while he was working (welfare ratio if fed at the fort). Also, this is assuming that the male labourer worked an average of 312 days a year, the same number Frankema and Van Waijenburg use.⁷⁶ The cost of food for the male labourer amounted to about 17% of the whole consumer basket for a family for the years 1836-1838, while in 1835 it was about 25%. However, as is noticeable the welfare ratio of an unskilled labourer is in both cases below 0,5, which would not even be enough to sustain two adults and one child. While this could indicate that a male unskilled labourer only had to provide for himself and his wife, it could also support the arguments that female labour might have been quite common on the Gold Coast or that the husband worked additional jobs.

⁷⁴ NL-HaNA, Kust van Guinea, 1.05.14, inv.nr. 1065.

⁷⁵ Yarak, 'West African coastal slavery', 51.

⁷⁶ Frankema and Van Waijenburg, 'Structural impediments to African growth?', 908.



Welfare ratios

Now that the methodology, source material and any assumptions and considerations have been explained, we can finally show the exact welfare ratios for various African labourers on the Gold Coast in Table 4.3. Any small fluctuations are mostly due to a decrease in the price of *romaal* (coarse cotton), inflation and wage increases. None of the welfare ratios is one or higher, which may give the impression that poverty was quite widespread on the Gold Coast in the early nineteenth century. However, as has been mentioned there is a genuine possibility that female labourers provided for the family as well. This would increase the welfare ratio of an unskilled free labourer to about 0,65 and that of a slave labourer to about 0,85. Furthermore, if we assume that an unskilled free labourer had a similar additional income and his wife worked as well, this would increase their subsistence ratio to fluctuate around 1,0. This would have been high enough to pay for a subsistence basket of goods for a whole family. If we also take into account that the labourer were fed at the forts, there would even have been some room left for the consumption of any ‘luxury goods’. Thus, as it is still unknown how ‘poor’ the Gold Coast exactly was, it is necessary to compare welfare ratios internationally. However, the next paragraph will first discuss the significance of skilled labour on the Gold Coast.

Table 4.3 Welfare ratios for various African labourers on the Dutch Gold Coast 1835-1838

Profession	1835	1836	1837	1838
Skilled	0,78	0,85	0,87	0,85
Skilled free	0,72	0,76	0,75	0,78
Skilled slave	0,80	0,87	0,89	0,87
Unskilled	0,38	0,42	0,39	0,40
Unskilled free	0,35	0,39	0,37	0,38
Unskilled slave	0,40	0,43	0,40	0,41
Average	0,62	0,69	0,67	0,70

As can be seen in Table 4.3, the skill premium – the difference between the wages of skilled and unskilled labourers – is more than hundred percent, which is rather high. Most skilled labourers on the Gold Coast were stonemasons, carpenters, smiths, sawyers and painters, while most unskilled labourers are classified as henchmen, workers and apprentices. Previous research has shown that a skill premium is a good proxy for the quality of the institutional framework of an economy. A high skill premium on the Gold Coast indicates that becoming an apprentice was probably quite difficult, as skilled labourers would have restricted entry to the ranks of craftsmen. Furthermore, it is a possibility that high interest rates would have prevented an apprentice of making the long-term commitment of learning a new skill, which would also have increased the skill premium. Thus, the high skill premium on the Gold Coast seems to indicate a rather poor institutional framework, which could have tampered with economic growth.⁷⁷ It is relatively unknown what impact slavery might have had on the skill premium on the Gold Coast. Table 4.3 shows that the skilled premium between slaves and free labourers was almost the same. It is a possibility that a slave was incentivized by differentiated wages out of a feeling of loyalty or gratitude.⁷⁸ However, this is beyond the scope of this study as the focus is on unskilled labourers. This allows for international comparisons of welfare ratios, which will be shown in the following section.

Welfare ratios in an international perspective

As mentioned, there are many factors which could have led to higher or lower welfare ratios. Therefore, to truly assess if Africa has always been poor, we have to compare welfare ratios internationally and over time. Graph 4.2 shows the welfare ratios on the Gold Coast in comparison to cities in Europe, America and Asia. These cities and countries have not been chosen randomly, but are based on the relatively scarce research available on welfare ratios for the period 1835-1838. Unfortunately, no clear data on the living standard of an unskilled labourer in other parts of Africa is available for this period. The only exception is the living standard of European settlers in the Cape Colony, whose welfare ratio seems to have fluctuated around 2,0 in the 1840s.⁷⁹ Naturally, there could be a number of problems underlying the comparison of welfare ratios internationally. First, the method by Allen assumes that every adult human being around the world has the same caloric requirements. Second, it assumes that the male breadwinner has to support the entire family. Third, the method assumes that a family is of a specific size of two adult and two children, even though family sizes could have differed drastically across cultures.⁸⁰ Still, the comparison does provide a rough idea of the comparative level of living standards on the Gold Coast around this time.

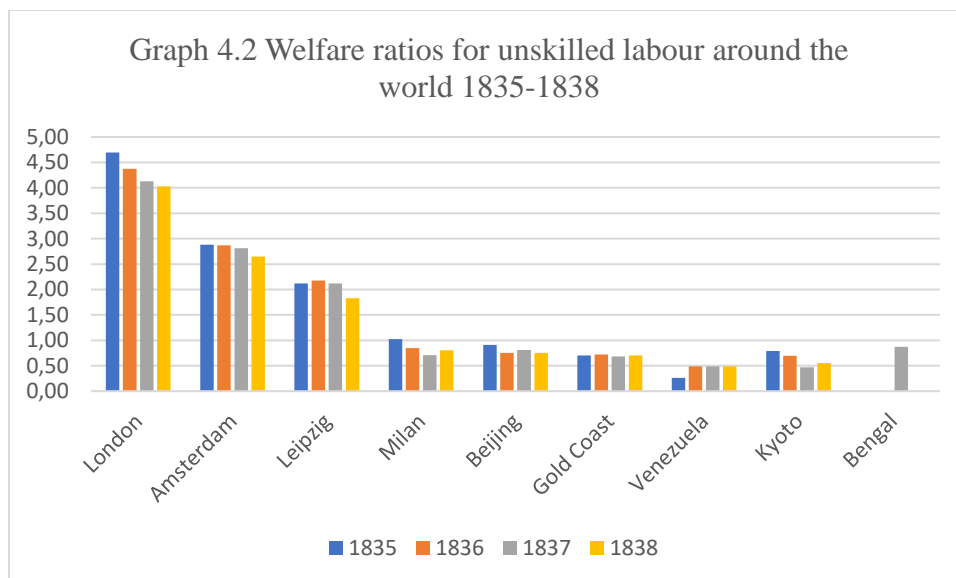
⁷⁷ Jan Luiten van Zanden, 'The skill premium and the Great Divergence', *European Review of Economic History* 13.1 (2009), 121-153.

⁷⁸ Klas Rönnbäck, 'Waged Slavery–Incentivizing Unfree Labour at Cape Coast Castle in the Eighteenth Century', *Slavery & Abolition* 37.1 (2016), 73-93, there 87.

⁷⁹ Pim de Zwart, 'South African living standards in global perspective 1835–1910', *Economic History of Developing Regions* 26.1 (2011), 49-74, there 64.

⁸⁰ Rönnbäck, *Labour and Living Standards*, 64-65.

As can be seen in Graph 4.2, the living standard of labourers on the Gold Coast was significantly lower than that of labourers in northern European cities, such as Leipzig, Amsterdam and London. This is hardly surprising as it is known that wages of the working population in these cities skyrocketed around this time.⁸¹ What is especially remarkable is that the living standard of labourers in Milan was barely higher than that of labourers on the Gold Coast. The same applies to the living standard of labourers in Beijing, which seems to be only slightly higher compared to the Gold Coast. Most importantly, the living standard of labourers on the Gold Coast was higher than the living standard of labourers in Venezuela and Kyoto. Although the Gold Coast does seem to have one of the lowest living standards of the compared countries, it was not much lower and sometimes even higher than some cities in Asia and South America. Therefore, the evidence shows that the Gold Coast was far from exceptionally poor. This finding contests with the view that all of sub-Saharan Africa has mired in poverty since the 1500s.⁸²



Note Graph 4.2: the welfare ratios for the Gold Coast are calculated using the unrevised assumptions that underly many of the older welfare ratio calculations, such as requiring fewer calories per person and based on a smaller family size. This enables a comparison with previous research and therefore the welfare ratios are higher than those in Table 4.3. Sources: data for London, Amsterdam, Leipzig, Milan, Beijing, Kyoto and Bengal based on Allen et al., ‘Wages, Prices, and Living Standards in China, 1738-1925: in comparison with Europe, Japan, and India’; Venezuela from L. Arroyo Abad, ‘Inestabilidad, Bienestar Económico y Costo de Vida en Venezuela durante el siglo XIX’. Data Gold Coast based on Nationaal Archief, Kust van Guinea, 1.05.14.

⁸¹ Allen, ‘The great divergence in European wages’, 428.

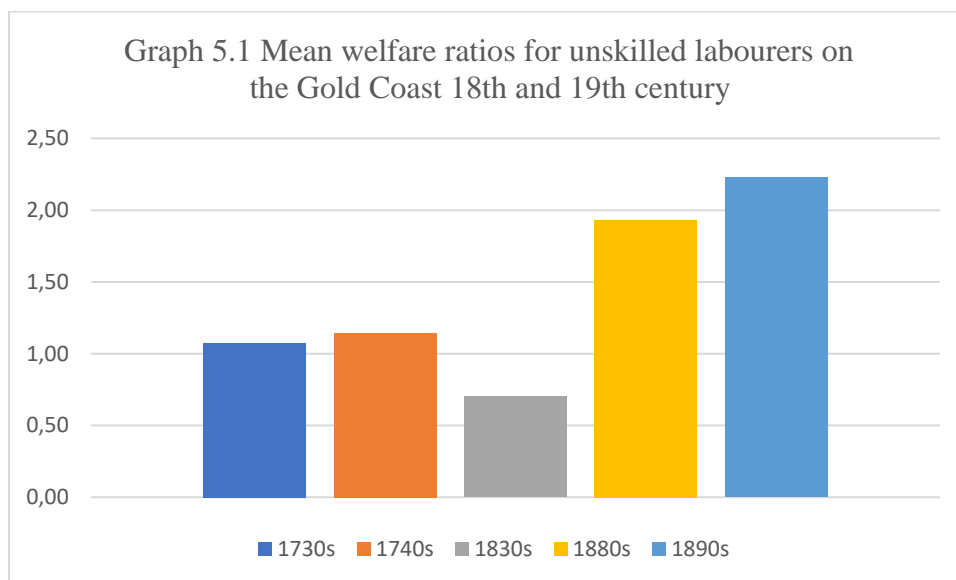
⁸² Acemoglu and Robinson, ‘Why is Africa poor?’, 23.

Conclusion

This chapter has focused on the results of this research and shows that although the living standard of labourers on the Gold Coast was low, it was not as low as some might have thought. There are many assumptions and considerations in the calculation of welfare ratios, which indicates living standards might have been higher than presented in this chapter. The income of women could have played a role in raising the welfare ratios, but any additional incomes by a free man could also have been a genuine possibility. However, the most important conclusion from this chapter is that the Gold Coast was not exceptionally poor. The next chapter will deal with the question if the Gold Coast became poorer over time.

5. Changing Living Standards Over Time

The previous chapter has shown that living standards on the Gold Coast were not very low in international perspective, but how have living standards developed over time? Graph 5.1 shows the mean welfare ratio of unskilled labourers in the 1830s, compared to welfare ratios in the eighteenth and late nineteenth century. It shows that in the 1830s, the living standard of labourers has dropped drastically, only to recover again at the end of the nineteenth century. We have already concluded that the Gold Coast was not exceptionally poor, so how is it possible that the living standard in the 1830s was so low compared to other centuries? To understand this issue, this chapter will first analyse how the living standard of labourers could drop that much between the 1740s and 1830s, after which the remarkable rise in the late nineteenth century will be analysed.



Note Graph 5.1: The welfare ratios over time are calculated using the unrevised assumptions that underly many of the older welfare ratio calculations, such as requiring fewer calories per person and based on a smaller family size. This enables a comparison with previous research and therefore the welfare ratios are higher than those in Table 4.3. Sources: data for 1730s and 1740s based on Rönnbäck, *Labour and Living Standards in pre-colonial West Africa: The case of the Gold Coast*. Data for 1880s and 1890s based on Frankema and Van Waijenburg, 'Structural impediments to African growth? New evidence from real wages in British Africa, 1880–1965'. Data 1830s based on Nationaal Archief, Kust van Guinea, 1.05.14.

Deteriorating living standards

One of the most important developments in the early nineteenth century that could explain the drastic decrease in living standards was the abolition of the slave trade. Rönnbäck has found that the living standard of labourers declined as the slave trade expanded, but there were also many Africans who

profited greatly from the slave trade.⁸³ The abolition of the slave trade caused many people along the coast to lose their means of making a living, especially those agents who were directly involved in the selling of slaves. However, the abolition also caused regular trade to decline, as British merchants complained that they had been “deprived of those means of supplying themselves with cloth and other commodities from the Slave Ships which formerly resorted to the Coast, that enabled them to make a handsome annual Sum in bartering them with the Natives for Gold Dust, Ivory and various other Articles.”⁸⁴ As mentioned in chapter two, the abolition made approximately ninety percent of the trade on the Gold Coast illegal, which must have had a profound effect on the welfare of the people along the coast.⁸⁵

Another important consequence the abolition could have had was an oversupply of labour along the coast, since no more able-bodied labourers were transported across the ocean. This could have resulted in a surplus of labour, which would have led to reduced wages. Support for this argument can be found in chapter two, where it has been concluded that the abolition resulted in an increase in the use of slaves in the town of Elmina.⁸⁶ The evidence shows that of all the labourers analysed between 1835 and 1838, only about a third was classified as being ‘free’.⁸⁷ As all other labourers did not have any such classification, this would not only indicate that these were likely slave labourers, but also indicates that free labourers were extraordinary enough to receive a distinct classification. However, the evidence shows that although the free labourers were a minority, plenty of them were employed by the Dutch to signify the existence of a factor market for free labour. Nevertheless, the growth of domestic slavery could explain the low living standards in the 1830s as the prevalence of slavery increased the supply on the local labour market. This could have put a downward pressure on the wages paid to free hired labourers, which would have decreased the living standards of labourers even further compared to the previous century.

The competition from slave labour pushing down wages is not unlike what happened in the precolonial period, when, according to Rönnbäck, the growth of the external slave trade simultaneously led to an expansion of domestic slavery. However, according to Rönnbäck, an important factor in this regard was the ‘guns-for-slaves’ pattern to the slave trade, which led to more violence and thus to an influx of refugees and slaves. Based on this information, one would expect violence to decrease as the slave trade was abandoned, but the destructive Ashanti invasions of 1806, 1811 and 1816 on the Fante tribes along the coast prove that this was not the case. On the contrary, these invasions were likely a result of the declining commerce on the Gold Coast. After the abolition, Ashanti traders were desperate

⁸³ Rönnbäck, *Labour and Living Standards*, 166.

⁸⁴ PR0, T. 70/1586, Memorial of the Governor in Chief, the Vice-President, and Members of the Council, the Governors of Windward Forts, and other Officers in the Service of the Said Committee, dd. Cape Coast Castle, 1 July 1807.

⁸⁵ Reynolds, ‘Agricultural adjustments on the Gold Coast’, 308.

⁸⁶ Yarak, ‘West African coastal slavery’, 54.

⁸⁷ NL-HaNA, Kust van Guinea, 1.05.14, inv.nr. 961.

to gain access to coastal ports, but the Fante acted to prevent an unimpeded trade.⁸⁸ Violence continued during the Anglo-Ashanti War between 1824 and 1831, which would even lead to an attack on the town of Elmina by the Fante in 1828.⁸⁹ Thus, despite the abolition of the slave trade, warfare continued to disrupt commerce and create flows of refugees to towns along the coast, which must have had a deteriorating effect on living standards in Elmina in the decade thereafter.

Another factor which must not be overlooked to understand the decrease in living standards is the negligence by European powers to invest time and money in their holdings on the Gold Coast. Especially the Dutch colonial regime was lacking in this regard. After the Napoleonic wars, the discredited general Herman Daendels was appointed Governor of the Gold Coast colony in 1816. Daendels had ambitious plans to turn the Gold Coast into a profitable plantation colony. His most ambitious plan was the construction of a road from Elmina to Kumasi, the capital of the Ashanti kingdom. However, his presence on the Gold Coast was short-lived as Daendels died of malaria within two years after his arrival. The Dutch government used his death as an opportunity to minimize Dutch presence, with the number of Dutch officials being reduced to a bare minimum, the abandonment of most of the forts and the subsidy for the upkeep of the possessions being drastically reduced.⁹⁰ This would have left little room for the colonial regime to spend a lot of money on the wages of local workers.

A revival in welfare

The high living standards on the Gold Coast at the end of the nineteenth century stand in stark contrast with the results of this study. The welfare ratio of an unskilled labourer almost tripled in the years between the 1830s and the 1880s. The most important developments in this period were in the year 1874, when the Gold Coast was established as a British Crown Colony and the indigenous system of slavery was abolished (although the British had already abolished slavery in 1833 and the Netherlands in 1863).⁹¹ Subsequently in 1877, the British moved their headquarters from Cape Coast to Accra, which is the city Frankema and Van Waijenburg analysed to reconstruct the living standard of unskilled labourers on the Gold Coast. Although these developments must have played important roles in the improvement of living standards on the Gold Coast, they are not enough to fully explain its remarkable increase.

The period between the 1830s and the 1860s was a period of unprecedented peace and stability for the Gold Coast. After the Anglo-Ashanti War ended in 1831, which had been devastating for commercial activities, the British realised their principal task was to secure peace between the Ashanti and the coastal tribes. Due to the abolition of the slave trade and the disastrous wars with the Ashanti, the coastal peoples increasingly had to rely upon European powers for protection. The European powers,

⁸⁸ Sanders, 'Palm oil production on the Gold Coast', 49-51.

⁸⁹ NJK Brukum, 'The Role of the Dutch in the Coastal Wars of 1807-1828', *Universitas* 11.1 (2008), 61-82, there 66.

⁹⁰ Kessel, *Merchants, missionaries & migrants*, 27-28.

⁹¹ Akosua Perbi, 'Slavery and the slave trade in pre-colonial Africa', (2001), 12.

mainly the British, assumed the role of defending the coastal states and abolished all forms of tribute formerly paid to Gold Coast rulers. The growth of British influence brought peace and stability to the coast, while reducing the power of local African rulers. The period that followed (1830-1843) was undoubtedly one of the most prosperous periods in the era after the abolition on the Gold Coast.⁹² Even the town of Elmina experienced a period of enormous growth of commerce between 1831 and 1868, although this most likely would not yet have led to higher living standards between 1835 and 1838.⁹³ These realisations conflict with the findings of Austin, Baten and Van Leeuwen, who argue that the living standard of people from the region north of the Gold Coast deteriorated during the 1840s.⁹⁴ Apparently, the Gold Coast region was unaffected by these developments, as living standards there presumably started to rise again.

British protection of the coastal towns did not only lead to the rise of an African merchant class, but also to an increasing mass participation in trade on the Gold Coast.⁹⁵ This prosperous era continued until 1863, when another war broke out between the British and the Ashanti. This time, the coastal tribes had to depend on themselves rather than on British support for protection. Declining fortunes of Accra merchants and other traders on the Gold Coast due to the conflict with the Ashanti, alongside heavy competition from European concerns, led many families in Accra to leave trade and seek other occupations. Although these people were driven out of commerce, the widening of occupations was a distinct feature of a developing modern economy.⁹⁶ After the purchase of the Dutch and Danish holdings, the establishment of an informal protectorate of coastal tribes, and the defeat of the Ashanti Kingdom in 1874, the British could finally unite the Gold Coast under a single banner.

In the era of growth and stability after 1831, the expansion of palm oil as an export commodity is one of the main factors that could have contributed to the rise of living standards on the Gold Coast. The significance of palm oil is already shortly elaborated upon in chapter two, but in all of West Africa the development of this trade is a major focus in analysing the transition of West African communities from slave trade to legitimate commerce.⁹⁷ Palm oil presented commoners and small-scale producers with the opportunities to engage in cash-producing enterprises, which led to a broader spectrum of persons who were able to participate in the global market. Additionally, the greatest portion of the annual export of palm oil on the Gold Coast seems to have come from Accra, since the city served as main port for the richest palm oil producing area of the region. However, the largest part of the palm oil industry was produced for local markets and domestic consumption, which meant that the palm oil industry

⁹² Edward Reynolds, 'Economic imperialism: The case of the Gold Coast', *The Journal of Economic History* 35.1 (1975), 94-116, there 100-101.

⁹³ Yarak, 'A West African cosmopolis'.

⁹⁴ Austin, Baten, and Van Leeuwen, 'The biological standard of living', 1299-1300.

⁹⁵ Reynolds, 'Economic imperialism', 104.

⁹⁶ *Ibidem*, 115.

⁹⁷ Donna JE Maier, 'Precolonial palm oil production and gender division of labor in nineteenth-century Gold Coast and Togoland', *African Economic History* 37.1 (2009), 1-32, there 1.

would never become as revolutionary for the region as the cacao industry in the twentieth century.⁹⁸ Still, following Frankema and Van Waijenburg, the longer experience of West African labourers with the concept of wage labour made their input more effective and therefore more valuable. Thus, the economic surplus that was created by legitimate trade trickled down to urban wages, which evidently had been the case for urban unskilled labourers in Accra.⁹⁹

Conclusion

Initially, it seems as if the living standard of labourers in the 1830's was remarkably low compared to the other decades. However, previous research confirms that the early nineteenth century was a period of stagnation and decline, which makes the results highly likely. The abolition of the slave trade meant an end to the inclusion of the Gold Coast in the global trading network and increased domestic slavery and conflict. Due to a surplus of labour, wages declined and living standards with it. New ways had to be found to make a profit, which was partially successful with the production of palm oil. At the same time, the rise of British influence and the establishment of the Gold Coast as a Crown Colony seems to have had an equally profound effect on living standards. It brought peace and stability to an otherwise violent region, while promoting the development of a modern economy based on hired labour. Thus, it has been shown that the trajectory of economic development on the Gold Coast was far from a straight path.

⁹⁸ *Ibidem*, 24.

⁹⁹ Frankema and Van Waijenburg, 'Structural impediments to African growth?', 915.

Conclusion

In this thesis, the living standard of labourers on the Gold Coast in the early nineteenth century has been analysed by looking at the welfare ratio of labourers in Elmina in the first half of the nineteenth century. To my knowledge, this is the first time a study has been conducted on welfare ratios of an indigenous population in any part of Africa in the early nineteenth century. The new evidence on living standards in the early nineteenth century allows for a reinterpretation of Ghana's economic history. First, it has been shown that the Gold Coast was not the poorest region in the world at the time. In contrast, the Gold Coast was relatively on par with East Asian and South American living standards. The Gold Coast was also not far behind southern Europe, although the living standard in north western Europe was substantially higher. This therefore challenges the view of some scholars that sub-Saharan Africa has always been the poorest region in the world. Second, no straight path can be found in the historical development of living standards in Ghana. People on the Gold Coast became poorer over time, had an economic revival in the late nineteenth century, only to become poorer again in the 1960's.

In the calculation of welfare ratios there are many assumptions that must be made, which is required by the comparative methodology of Allen that is used. It is therefore almost certain that the income of a family is severely underestimated as it does not include any additional conditions, such as the income of female and child labour. This thesis has shown that there is enough evidence that women provided for the family as well. Although none of the skilled labourers were female, the income of unskilled female workers was substantial enough to be able to significantly increase welfare ratios. Furthermore, this thesis has shown that slaves presumably worked longer days than freemen, so we can assume that free labourers had the time to work extra jobs or use this time to produce their own food. The welfare ratios that were calculated in this thesis are therefore probably an underestimate of the real welfare of a family on the Gold Coast. Nevertheless, as other studies have used the same methodology as in this research, these issues do not bias the results in comparative terms.

It is questionable how persistent the influence of extractive colonial institutions and slave trade were on Ghana's economic development. On the one hand, the slave trade in the eighteenth century resulted in lower living standards, but when this trade was abolished living standards decreased even further. This was because the slave trade dominated the economy of the Gold Coast in the early nineteenth century; its abolition left an economic vacuum. Although the slave trade was abolished, slavery would persist on the Gold Coast until 1874. An oversupply of labour and a significant rise in domestic slavery put a downward pressure on the wages of labourers along the coast. New ways had to be found to make a profit, which was partially found in the production and export of palm oil. Concurrently, the rise of British dominance led to peace and stability in which the Gold Coast could thrive, although for the African merchant class the competition from European concerns was fierce. Still, the colonial era did result in the development of a modern economy, which must have had an

important influence on the remarkable rise of living standards in the course of the nineteenth century. Future research on other periods of time is needed to fully understand the impact of colonialism and slave trade, for which the British and Danish archives could be useful. Additionally, the abundance of wage data on skilled labourers could be attractive for future research on the development of the skill premium over time.

In conclusion, the development of living standards on the Gold Coast contains major roles for colonialism and slave trade, which both negatively and positively influenced the development of living standards. Naturally, slave trade was negative for the people that were made slaves, but by the time it was abolished the economy of the Gold Coast had become too dependent on it. Subsequently, colonialism seems to have succeeded in improving the lives of people on the Gold Coast by bringing peace and stability. Although these factors do not fully explain the current economic growth of Ghana, they contribute to our understanding on the growth and decline of regions in sub-Saharan Africa.

Appendix

The data used in this thesis to sketch the developments in wages, prices and to calculate real wages on the Gold Coast are available in Excel upon request: please email joris@kursten.nl. Below details on conversions and interpolations are given.

Wages: Consistent series of wage data were found in the archives for the years 1835 to 1838.

Maize: No price series for maize were found in the archives, so the gaps were filled by interpolation. Price data for the years 1699-1762 was taken from the Excel sheet of Klas Rönnbäck, *Labour and living standards in pre-colonial West Africa: The case of the Gold Coast*, made available upon request. Price data for the years 1880-1945 was taken from the Excel sheet of Ewout Frankema and Marlous Van Waijenburg, 'Structural impediments to African growth? New evidence from real wages in British Africa, 1880–1965', on the *International Institute of Social History* website: <http://www.iisg.nl/hpw/goldcoast-wages-prices-welfare-ratio.xls>: Retrieved June 10, 2020.

The following formula was used:

$$MAIZE(t) = 10^{-7} e^{0,0058t} \quad R^2=0,7631$$

Yams: Data on the price of yams was found for the year 1862, but unfortunately no quantity was given. Therefore, the gaps were filled by interpolation. Price data for the years 1699-1762 was taken from the Excel sheet of Klas Rönnbäck, *Labour and living standards in pre-colonial West Africa: The case of the Gold Coast*, made available upon request. Price data for the years 1950-1954 was taken from the Excel sheet of Ewout Frankema and Marlous Van Waijenburg, 'Structural impediments to African growth? New evidence from real wages in British Africa, 1880–1965', on the *International Institute of Social History* website: <http://www.iisg.nl/hpw/goldcoast-wages-prices-welfare-ratio.xls>: Last update June 10 2020. The following formula was used:

$$YAMS(t) = 10^{-10} e^{0,01t} \quad R^2=0,8113$$

Exchange rate: The prices found in the archives were in guilders, while the prices in the work by Rönnbäck, *Labour and living standards* were in measurements of gold, namely ackeys. Prices in the work by Frankema and Van Waijenburg, 'Structural impediments to African Growth?', were in pounds sterling. To make interpolation possible, 1 ackey was converted to £0,25. This is the exchange rate as found in Rönnbäck, *Labour and living standards*. Subsequently, pounds sterling were converted to guilders using grams of silver. The silver value per pound sterling was taken from the excel sheet of Gregory Clark, 'England prices and wages since the 13th century', on the *Global Price and Income History* website: [https://gpih.ucdavis.edu/files/England_1209-1914_\(Clark\).xls](https://gpih.ucdavis.edu/files/England_1209-1914_(Clark).xls) : Retrieved June 10, 2020. For the entire period studied 1 pound sterling was 104,6 grams of silver. The silver value per guilder was taken from the Excel sheet of Arthur van Riel, on the *International Institute of Social History*

website : <http://iisg.nl/hpw/prijzen19earthur.xls> : Retrieved June 10, 2020. For the entire period studied 1 guilder was 9,61 grams of silver.

Meat: Data on the price of meat was found for the year 1862, but unfortunately no quantity was given. Nonetheless, the price of ‘three meat’ was used for 3 kilograms. Adjusted for inflation for the years 1835-1838 according to the *International Institute for Social History* website: <http://www.iisg.nl/hpw/calculate.php> : Retrieved June 10, 2020.

Palm oil: Data on the price of palm oil was found for the years 1834 and 1836. As the price did not change between these years, the same price was used for the years 1835-1838.

Candles: No price data was available for candles, but assumed equal to price of lamp oil. Price data of lamp oil was available for the year 1839. This price has been adjusted for inflation for the years 1835-1838 according to the website of the International Institute for Social History, <http://www.iisg.nl/hpw/calculate.php> : Retrieved June 10, 2020.

Soap: No price series for soap were found in the archives. Price of soap was estimated equal to lamp oil, in accordance with Allen (2001).

Cotton: Price series for *romaals* (coarse cotton) were found for all years from 1835 to 1838.

Fuel: No price series were found in the archives for quantities of either wood or coal, so 7,5 percent was added to the total price of a consumer basket of goods.

Metric conversions: The prices given in the sources for palm oil and lamp oil were given in English measures, namely gallons. As the consumer basket of goods requires metric measures, the English measures were converted into metric using Peter Lindert’s Excel sheet: ‘English vs. Metric measures’ on the *Global price and income history* website: <http://gpih.ucdavis.edu/Converting.htm> : Retrieved June 10, 2020. 1 gallon = 3,7854 litres.

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