Living standards in a West African 18th century micro-cosmos: labourers, wages and wage discrimination at the Royal African Company forts

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*Very preliminary project overview, meant to give an preliminary description of the methodology of the project, and some preliminary benchmark results.*

Please do not quote!

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1. Introduction

Africa is today the poorest continent in the world. But has it always been this poor, and if not, when did Africa become poor? Many scholars have tried to explain the current level of economic development in Africa, attributing African ‘underdevelopment’ for example to post-colonial predatory states or military conflicts, unfavourable geography and/or natural resource curses, as well as the impact of historical colonialism or of the slave trade. There have however been extremely few attempts to study pre-colonial living standards in Africa. Without such studies, we have no initial benchmark to compare the later development to. It is hard to analyze the impact of historical events and processes such as the slave trade and colonialism without such a benchmark. This project is an attempt to provide one such benchmark, analyzing living standards in West Africa during the 18th century by studying the wage levels of labourers in certain West African coastal locations. To the knowledge of this author, this is the first attempt to undertake such a study for this part of the world.

2. Background

The topic of African economic history received quite some attention by scholars from the late 1960s through the 1980s. A lot of attention was paid not the least to the issue of the slave trades - most importantly, the so-called ‘numbers game’ of estimating the size of the slave trades (see for example Curtin 1969; Hopkins 1973; Curtin 1975; July 1975; Austen 1987, TSTD2 2010). There has also been quite some research into the trade goods that Europeans sold in order to acquire slaves, the terms of this trade and the monetary instruments of the trade (Johnson 1966; Curtin 1983; Hogendorn and Johnson 1986; Eltis and Jennings 1988; Gemery, Hogendorn and Johnson 1990; Law 1991; Law 1992; van den Boogaart 1992; Eltis 1994). In a classic and quite influential book, Walter Rodney applied dependency theory to the case of Africa, arguing that Europe ‘underdeveloped’ Africa through the slave trade and later through colonialism. In pre-colonial times, Rodney claimed,
there had been comparatively highly developed regions, for example in West Africa (Rodney 1972; see also Agbodeka 1992 for a similar argument or Thornton 1998 for a critique).

In response to all the attention given to the external sector, many scholars wanted to devote more attention to the domestic economies of Africa. The problem was and is however finding empirical evidence for such an analysis, because of a general lack of sources. For example, we still today know little of pre-colonial population levels and densities in Africa, beyond guesstimates by European explorers and missionaries. Judging from the sole study using contemporary sources that enable a closer estimate – statistics of baptisms from the Kingdom of Kongo – the population density was extremely low outside of the capital region (Thornton 1977). This is not very surprising: it is by now quite a broad consensus that agricultural productivity was relatively low in African in pre-colonial times, thus leaving a small surplus to support people outside of the agricultural sector. Land was at the same time ‘extremely cheaply accessible’, according to Gareth Austin, and strangers were most welcome to settle on available land (Austin 2008b; Austin 2009; see Thornton 1990-91 and Thornton 1998 for a differing opinion). There has also been quite a lot of discussion on the topic of domestic or indigenous slavery in Africa. A common claim from many scholars is that slavery in Africa was less malign than slavery elsewhere, since slaves in Africa experienced significantly more rights and freedom, and supposedly were better treated, than for example African slaves in America were (see for example Miers and Kopytoff 1977; Cooper 1978; Meillassoux 1978; Thornton 1998; Lovejoy 2000; Perbi 2004).

One core conflict that still occasionally resonates in the field of African economic history was the so-called ‘substantivist-formalist’ divide. ‘Substantivists’ such as Karl Polanyi and George Dalton argued that applying ‘formal’, classical economic concepts and theory (such as the assumption that markets were driven by the interplay between supply and demand of a good) on a pre-colonial African context essentially was inappropriate, since the African economies at the time largely were driven by other incentives (e.g. reciprocity or institutional redistribution) and that markets in the economic sense were a marginal phenomenon. This claim had implications both for the supposed existence or non-existence of goods- and factor markets. The prices reported in many sources were thus, according to Polanyi, generally set by the local rulers rather than by a market (Bohannan and Dalton 1962; Dalton 1962; Polanyi 1964; 1966; Dalton 1976). Several other scholars have since argued that Polanyi and followers underestimated the extent of market penetration in pre-colonial Africa, particularly when it came to the issue of markets for goods, and overestimated the degree of governmental intervention on markets. There is now quite much evidence to support the argument that markets for goods – however imperfect – existed and were quite well-developed in many parts of pre-colonial Africa. The prices for staple goods do for example seem to fluctuate over time as we would expect from market prices, rather than being stable as one would expect from institutionally regulated prices (Johnson 1966; Lovejoy 1974; Lovejoy 1982; Metcalf 1987; Law 1991; Law 1992). Most importantly for this study is also that the Akan economies (on what the Europeans called the
Gold Coast, in current-day Ghana), were based on trade, and thus ought to have had quite well-developed markets for goods. Trade in the Akan states was furthermore never state administered, and there were no attempts by the state to limit private trade that we know of (Daaku 1972).

Regarding the existence of a factor market for labour in particular, scholars such as Polly Hill and George Dalton have argued that wage labour was almost unthinkable culturally in Africa prior to the 19th century, and was thus virtually non-existent. Slave labour was according to this school of thought the main available source of labour (Dalton 1976; Dalton 1978; Hill 1978). Anthony Hopkins has on the other hand maintained that markets for both goods and factor were ubiquitous and that there was a labour force in West Africa that was highly mobile, and “could engage freely in a variety of occupations”. The fact of a high labour mobility, Hopkins argued, increased the bargaining power of labour, driving up the reservation wage (Hopkins 1973:20-25; Hopkins 1978). Gareth Austin has recently claimed that while wage labour certainly existed in pre-colonial Africa, it was most probably very marginal – and primarily limited to the European enclaves. It is in just such a situation that most of the African continent experienced, he also argues, where a high land/labour-ratio might drive up the reservation wage of labour, that it becomes profitable to introduce and use coerced labour, such as slaves (Austin 2009; see also Domar 1970). Other scholars – studying for example textile- or ironworking – seem to agree with Hopkins that the non-slave labour force could be highly mobile (Krieger 2004; Shea 2006).

Since the 1980s, African economic history has received considerably less attention, in comparison to many other fields of research. As one of the key scholars in African economic history, Anthony G. Hopkins, has noted, however, the field has started to receive renewed attention in recent years (Hopkins 2009). One well-known new field of research related to African economic long-term development has dealt with the so-called “reversal of fortune”-thesis. The thesis was proposed by Daron Acemoglu, Simon Johnson and James Robinson (2001; 2002). In essence, the authors argue that European colonialism led to imposed institutional change in the colonies. In areas of large European settlement (the so-called European off-shoots of North America, South Africa, Australia and New Zealand), institutions favourable to economic growth were introduced. In areas less suitable for European settlement, including large parts of Africa, extractive institutions – which in the long term were unfavourable to economic growth – were imposed. The hypothesis has since received quite some criticism by other scholars, both on empirical and theoretical grounds (see for example Olsson 2004; Austin 2003; Bayly 2008; Hopkins 2009).

The connection between the early-modern slave trades, and current economic development, has also been studied in a number of new articles. In a couple of recent studies, Nathan Nunn has for example argued that the slave trade had a considerable (negative) effect upon the economic development of Africa. Estimating the size of the slave trade by region, Nunn shows there is a substantial impact upon current-day economic
development of these same regions, even if we control for various other explanatory factors. Nunn tries to explain the result by reference to the increasing social mistrust generated by the slave trade (Nunn 2008; Nunn & Wantchekon 2009). An alternative model, echoing Walter Rodney in emphasizing the social stratification and a sustained culture of violence as the causal mechanism, has been suggested by other scholars (Whatley and Gillezeau 2011). In a recent article, Acemoglu and Robinson have also suggested that the slave trade (later to be reinforced by colonialism) underdeveloped Africa through its impact on institutional development (Acemoglu and Robinson 2010).

Many of these new studies of African economic history do however suffer from a problem emphasized by Gareth Austin, namely the ‘compression of history’ (Austin 2008a), i.e. attempting to find statistically significant relationships between modern-day economic development and historical phenomena such as the slave trade or colonialism, while ignoring long periods of history in between. Such a compression of history, Austin argues, leads to an over-simplified analysis of causal relationships. Ideally, we would instead need to study the development of living standards quantitatively and over time, in order to be able to explain both the short- and long-term impact of specific historical events and processes. Such studies are however very few when it comes to the African continent. There exist a couple of studies of inequality among the settler population in early modern South Africa. One conclusion from these studies is that the settler population in general was quite poor, but that a small elite emerged in the 18th century (Fourie and von Fintel 2010; Fourie and von Fintel 2011). There is also ongoing research into early-modern South African living standards, by Pim de Zwart. His findings indicate that living standards – measured by real wages – for the settler population in South Africa improved steadily throughout the 17th through 19th centuries. By the late 18th century, he argues, real wages for unskilled labour in South Africa had bypassed real wages of similar categories of labour in certain parts of Europe, such as Leipzig (de Zwart 2011).

Studies of early modern living standards in Africa, other than South Africa in particular, remain scarce. The social history of the Cape Coast Castle, including the social history of labour at the castle, has been studied qualitatively in a couple of books and articles (see for example St Clair 2006; Reese 2005; Reese 2010). Pre-colonial living standards in West Africa has also been studied using anthropometric data, in two cases: on the one hand people of Yoruba origin (a people living in the region of current-day south-western Nigeria, Togo and Benin) and on the other hand people born in northern Ghana and in Burkina Faso. The results show that people in the samples studied were shorter than people from northern Europe, but not shorter than southern Europeans at the same time. The Yorubas in particular, David Eltis argues, seem to have experienced a notably higher standard of living than many other people in West Africa (Eltis 1990; Austin, Baten and van Leeuwen 2011).
3. Theory and research question

The task of the present paper is to study living standards in West Africa quantitatively, in a global comparative perspective. The project will initially focus upon the region of the Gold Coast (current-day Ghana). The two main research questions of this project are thus the following:

- How and why did the wages differ between various categories of labourers at the fort of Cape Coast Castle?
- What was the living standard of labourers at the Company fort, in comparison with labourers elsewhere in the world?

By studying living standards of labourers at the fort, I hope to be able to say something not only about the living standards for the particular individuals in the sample, but also for labour more broadly in the region. A historical method for such a study has been developed by Robert Allen, along with a couple of co-authors, in a number of articles and books comparing living standards internationally in a long historical perspective. The method means studying ‘welfare ratios’ by calculating the real wages in the form numbers of a comparative basket of goods that they could purchase (Allen 2001; Allen 2009; Allen et al 2011a; Allen et al 2011b; see also application on the case of South Africa by de Zwart 2011). Allen has suggested the use of two different ratios – one ‘subsistence ratio’ based on a basket with basic goods, the bare necessities in life, and one ‘respectability ratio’ based on a basket with a broader content including some decencies and luxuries as well.

Central to the task of this project is the idea of a reservation wage of the labour force, i.e. the lowest wage rate a worker would demand to be willing to accept a job (Steedman 2008). There are several factors influencing an individual agent’s reservation wage, including the agent’s present need for an income; expectations about the possibility of and probable earnings from other economic activities; the cost of finding alternative means of subsistence; labour-market institutions such as unemployment benefit-schemes; the agent’s skills/capacities (e.g. education), as well as; the agent’s preference for leisure.

The agents’ expectations about earnings from other economic activities could – under the assumption that people hold reasonably well-informed expectations – be assumed to reflect the general living standard of a region quite well. The expectation is thus that there is a direct, positive relationship between living standards and the reservation wage, all else equal. Put simply: if living standards in the region were high in general, and a labourer had the possibility to choose between various ways of earning a living to support him- or herself, then the reservation wage would also be quite high. Vice versa, if alternative modes of earning a living were few and poor, this would reduce the reservation wage.

To be able to operationalize the use of the idea of a reservation wage for this study, a couple of core questions must be dealt with. The first concerns the existence of a labour market in the first place. As was mentioned previously, there has been a discussion about the extent to
which factor market had developed in Africa prior to colonization. As we will see, local labourers do not seem to have been foreign to undertaking work for economic remunerations – i.e. doing ‘wage labour’. At the same time, it now seems safe to assume that, to the extent that there existed a ‘market’ for this labour, it was far from the economists’ assumption of a market operating under perfect competition. We do at the same time certainly have a problem in the form of slavery, since a large part (but certainly not all) of the local labour force was made up of slaves. I will return to these two problems shortly, when describing the source used.

A second issue is the representativity of the non-slave workers in the sample. A reservation wage does naturally vary between individuals. In a sample large enough, however, individual preferences will presumably play less a role than the material living standards of the agents’ class in society. But, it could be argued, even if a group of individuals in the sample could be classified as ‘wage labourers’, with a reservation wage, they were – as previous scholars mentioned earlier have argued – a minute share of the total population in the region, and possibly unrepresentative for that reason. But even if the options where a free agent could get an employment for a wage were few (so that the class of ‘wage labourers’ is small), the central concern is whether we have any reason to expect that the situation for other classes in society (most importantly small farmers) differed substantially from the ‘wage labourers’ in the sample. Since the labour market was of marginal size, it ought to have had little influence on living standards in the region as a whole. But the labour market ought, on the other hand, to be an indicator of living standards. As was mentioned earlier, previous scholars have shown that there was a very low population density – and thus a high land/labour-ratio – in Africa throughout the pre-colonial period. They have also found that land often was extremely cheaply accessible. We ought then to be able to assume that the situation for the ‘wage labourers’ to a certain extent also reflected those of African small farmers. If an individual could earn more from self-employment in the agricultural sector, than from accepting waged employment, he or she would be better off by reclaiming land for agriculture. This would have put an upward pressure on wages on the ‘labour market’, in order to be able to attract at least some people to accept waged employment. On the other hand, if earnings from ‘wage labour’ were comparatively high, at least some small farmers ought to have been tempted to abandon working the land and seek waged employment instead, thus putting a downward pressure on wages on the ‘labour market’. At the same time the employers – wanting to maximize their profits and minimize costs, including costs of labour – would avoid paying more than was absolutely necessary (i.e. the reservation wage) to hire workers. Given that the ‘labour market’ was marginal relative to the whole economy, the wages on the labour market ought then to have converged on the earnings possible from other means of subsistence. Even though the ‘labour market’ was far from perfect, the wages paid to workers could thus, I believe, give us an idea (albeit crude) of the living standards of quite a large part of the population in the region.
4. Source material & method

4.1. The source

For this study, I use the accounts from the Royal African Company and the Company of Merchants Trading to Africa, sometimes referred to as the T/70-series, in the National Archives in Britain. The Royal African Company (RAC) was initially established in the late 17th century as the privileged British slave trading company. From the early 18th century, the privilege on slave trading was revoked in Britain. The RAC was reformed to instead maintain a number of forts along the African coast, in order to simplify – or so the idea was, at least – slave trading for private British subjects. The Company received a subsidy from the British government for this service. In 1751, the Company of Merchants Trading to Africa took over this task from the RAC. For simplicity, I will in this paper refer to both companies jointly, using one term, henceforth the Company. The Company kept accounts of their economic activities on the African coast which have been preserved, with some gaps, from the 1680s, when the Company was established, until the 1820s when the British government took over the administration of British forts in Africa.

4.2. Wage data

A number of people were employed at the Company forts, and were regularly paid wages. There seems to be plenty of evidence that the Company was careful in trying to keep wage costs down as much as possible (Reese 2005). The accounts classify the employed into various categories, most often very clearly separated. One category was free, European men (and the odd woman) of what anachronistically might be called white-collar workers. This category included the governor of the fort, factors, secretaries and writers, surgeons, surveyors and some high-ranking militaries. A second category included free, European, blue-collar workers. This category was made up of a number of craftsmen – including carpenters, blacksmiths, coopers and others – but most importantly of a long list of soldiers (as well as some low-ranking officers). A third category included free, African or biracial men paid on a regular basis. The occupations were similar to the second category, but there were only a few biracial or African soldiers. A fourth category was made up of what the Europeans called “free labourers and canoemen” employed on a temporary basis. This category primarily included messengers on the one hand, and canoemen on the other. A fifth and final category was made up of Company slaves, both men and women. Company slaves were clearly separated in the accounts from the slaves traded to be transported to the Americas, and were used for the basic maintenance of the fort. The occupations included a number of different craftsmen, canoemen, as well as a large sample of unskilled labourers, of both sexes.

I have so far only made use of four categories of workers – the ‘tenured’ staff (categories 1, 2 and 3) and the slaves (category 5). Wages were in these cases paid regularly, every second or
third month. The fourth category would theoretically be very interesting to use for an international comparison, since these are explicitly claimed to be ‘free’ (i.e. non-slave) and most often seem to be quite unskilled labourers. They – along with the workers in category 3 – do at least show that there must have existed some crude form of labour market in the region (see background discussion on the existence of a labour market in pre-colonial Africa), so that the Company could employ these people in return for a wage. A theoretical problem is however that it is somewhat uncertain whether all of these labourers in reality always were free labourers. Ty Reese has found examples where labourers – initially perceived to be ‘free’ by the European Company – in reality turned out to be slaves owned by an African *caboceer* (Reese 2005; 2010). These might however have been exceptions to a rule. A methodological problem of using this data for an international comparison is also that the wages for this category of workers were task-based, rather than monthly/annual wages as in the other cases. A messenger could for example be paid to deliver a letter from Whydah to Cape Coast Castle. A canoeman could be paid to transport a canoe full of goods from Cape Coast Castle to Annamboe. In order to make use of these data, it would therefore be necessary to estimate how long such a task took on average.

Regarding the fifth category, the Company slaves, it is valid to ask: did the Company really pay wages to slaves? The system of slavery at the Company forts did to some extent differ from indigenous African slavery. Ty Reese has argued that the Company slaves constituted a “hybrid form of slavery within the Atlantic”, embracing both European conceptions of a slave as property and West African customs that granted certain important rights to the slaves, so that the Company slaves in practice enjoyed pretty much the same privileges as free labour (Reese 2005; 2010). One of these rights was clearly the payment of a subsistence wage: the accounts clearly record remunerations to the Company slaves every third month, for example under the heading “Company Slaves Pay List”. The payments to slaves are largely in kind, but normally in trade goods (e.g. alcohol, tobacco, textiles or in some cases even guns), just like much of the remunerations to non-slave labourers. Payments are occasionally made in local currencies such as cowries or gold. Some of the payments in kind might have been used by the slaves themselves, but it seems reasonable to assume that the majority might have been sold on local markets in order for the slave to be able to purchase basic foodstuffs necessary for his or her own survival.

One can of course discuss whether the term ‘wage’ (and more specifically the concept of a ‘reservation wage’) really ought to apply in the case of a slave, who has not offered his or her services voluntarily to an employer. For this paper, I will leave the discussion on terminology aside, and simply use the term ‘wage’ as shorthand for all economic remunerations to the people working for the Company locally – regardless of whether they were legally ‘free’ people or slaves, and regardless of whether the wage was paid in cash or in kind. Whether we are able to use the wages paid to slaves for a study of reservation wages of labour (and therefore of living standards more broadly, as discussed above), is however a more important issue. Since the concept of a reservation wage by definition
requires consent (which by definition is not present in the case of slaves), it would at first glance seem theoretically impossible to use data for this category of workers for anything more than to study the actual living standards of the group of slaves per se. This might be an important topic to study in and of itself, of course. But there is also, I believe, a relationship between the wages paid to Company slaves, and wages paid to free labourers. Firstly, even if a slave formally had no chance to deny working, thus theoretically rendering the concept of a reservation wage null, the reality was often more complex. As Fenoaltea has argued (1984), it was common in slave societies to use different incentive structures, not only the whip but also various ‘carrots’, to get slaves to work. A wage paid to slaves could from this perspective be considered as a form of efficiency wage (Weiss 2008), paid to further incentives in order to get the slaves to put a (qualitative) effort into the work. Secondly, the wages paid to slaves at least show a lowest level below which the reservation wage for free labourers ought not be able to fall in the long run, else it would be economically rational for the employer to employ free labourers instead. Assume for simplicity that free and enslaved labour is equally productive, and that enslaved labourers receive a certain wage. If the wage paid to a free labourer would be as low as that paid to the slave, then the employer could save the capital cost of purchasing the slave by employing the free labourer instead. If free labour furthermore was more productive than slaves, as many scholars would argue was the general case, the employer could profit even more from employing free labour if the wages paid were similar. Thirdly, the West African forts had direct access to the local slave markets, so the cost of purchasing a slave would most certainly have been comparatively low. At the same time, the growing demand for slaves in the transatlantic slave trade contributed to an upwards pressure on the selling price for slaves (at least until the British abolition of the trade in 1807) – thus driving up the opportunity cost of using slave labour locally instead of exporting the slaves, creating an incentive to economize with the use of slave labour at the African forts. Again, this might have included paying existing company slaves efficiency wages (‘carrots’), in order to reduce the opportunity cost of owning Company slaves. The wage difference between free and enslaved labour could thus for several reasons have converged, and reached quite low levels of dispersion. If living standards were high for the free population (i.e. high above a basic subsistence level), so that the reservation wage for free labour was high, there were always strong incentives for the Company to increase the efficiency wage for the slave labour, thus contributing to an upwards convergence in wages between the groups. If on the other hand living standards were low for the free population (i.e. at or close to subsistence level), the reservation wage of the free labour force ought to have converged downwards, towards a (subsistence) wage level. As will be shown later in this paper, the first evidence assembled so far indicate quite low levels of wage dispersion among the African labourers and slaves employed by the Company. The wages paid to the Company slaves could therefore, I believe, be used as a proxy for wages paid to other labourers, either skilled or unskilled.
4.3. *Price of goods and units of account*

In order to compare the wages paid to the workers employed in Cape Coast Castle to workers in other places around the world, we also need to know the prices of goods locally – i.e. we essentially need to calculate real wages at purchasing power parity. Most scholars of West African economic history have focused upon the slave trade, and the trade goods that Europeans sold in order to acquire slaves (Hopkins 1973; Curtin 1975; Austen 1987; Eltis and Jennings 1988; van den Boogaart 1992; Eltis 1994). The Company also utilized the forts for the distribution of and trade in many staple goods, for example in order to be able to provision ships in need of foodstuffs to feed the slaves purchased on the African coast. Locally produced staples, such as corn (i.e. sorghum/durra), yams and palm oil, were for that purpose bartered for or purchased by the Company. European provisions of various sorts, including for example meat, cheese and butter, were also sold on the coast to some extent, or given as gifts to local rulers. European provisions were however mainly used to pay for wages, in kind, for the men at the forts. These transactions – barters, purchases, sales, gifts and wage payments - were all noted in the accounts of the Company.

The transactions – purchases, sales, gifts, barters of goods, and the payment of wages - were accounted for in various currencies, varying over time and between different geographical locations along the coast. The transactions in the accounts in most cases refer to barter, where no monetary transactions really took place. Reporting ‘prices’ in monetary terms might in that perspective seem ambiguous. This is especially the case when a particular barter involves a range of different goods, the so-called ‘sortings’ or ‘assortment’ trade, based on a ‘trade Ounce’ of goods (i.e. an assortment of goods that in London was worth the equivalent of one ounce of gold in total). Polanyi once claimed that the unit of account used by Europeans in the West African trade was ‘fictional’. This seem to arise mainly from his claim that the mark-up ratio on the ‘trade Ounce’ on average was set unilaterally by the company at 100 per cent (Polanyi 1964; 1966). Previous scholars have shown that there was no such set and stable relationship between the value of an assortment of goods in England, and the amount of gold or other goods that they could be bartered for on the African coast. In reality, as for example Marion Johnson has shown, an increasing amount of goods had to be included in the ‘trade Ounce’ to pay for an ounce of gold during the 18th century, while both Johnson and Robin Law has shown that there was devaluation in the value of cowries around the same time (Johnson 1966; Hogendorn and Johnson 1986; Curtin 1983; Law 1991; Law 1992). Studying the accounts, furthermore, a more nuanced picture emerges, where there is no uniform mark-up on European goods. When a shipment of goods is delivered from England, the accounts report on volumes of goods delivered and the invoice price in London of the goods in question, most often also translated into local prices using an ‘exchange rate’ versus gold (if this was the main unit of account at the time, see more on this below). This is normally followed by another entry in the accounts, reporting explicitly on the prices prevailing on the African coast at the time, for the same goods. It is therefore quite normal that the mark-up ratio varies quite substantially – both between goods and over
time. To take a couple of examples: the mark-up on the price of meat or brawls was roughly 100 per cent in 1740, fitting Polanyi’s claim. The mark-up on bread was however around 67 per cent, on tallow 150 per cent, and on Guinea stuffs 300 per cent in the same year. In 1760, the mark-up ratio on Guinea stuffs had fallen to around 80 per cent, and the mark-up for tallow had fallen to 140 per cent (see source to graph 2 below). There is thus little evidence that supports Polanyi’s claim that the mark-up ratio was set at 100 per cent on average, and no evidence that it was set unilaterally by the Europeans. The prices did furthermore vary between different transactions. As a rule, for example, reimbursements to the white salaried staff at the forts – when paid in kind – were given at a discount price compared to the normal selling price of the same goods. In contrast, payments to African slaves and free labourers – when paid in kind – were paid demanding a higher price for the goods in question.

Most importantly, also, all transactions taking place at one specific geographical place and at one point in time are accounted for in the same currency. Wages were thus paid for in the same currency as the prices of goods were reported in. Whether or not a trade ‘ounce’ of goods really traded for an ounce of gold is therefore not a major concern for the purpose of this research project. Since all wages and prices are reported in the same currency, we do not have any problem of having to convert between currencies in order to calculate a ‘welfare ratio’ for the local labour force.

Cowrie shells were used as a currency in some parts of West Africa (Johnson 1970a; Johnson 1970b; Hogendorn and Johnson 1986), and figure in parts of the accounts of the Company. For the main fort, Cape Coast Castle in current-day Ghana, two forms of currency of account were used: in the early 18th century, all transactions and wage payments were accounted for by the troy weight of gold (in marks, ounces, ackies and takus of gold). In the case of barters, the estimated nominal value of the barter (in total and for the separate goods included in the deal) were reported in the accounts. In many cases the local prices and wages were also translated into pounds, shillings and pence using an exchange rate that was noted in the accounts. For the later 18th century, all accounts were kept in pounds, shillings and pence.

Goods were regularly measured in quite well-defined, standard contemporary units such as pounds or gallons. These have been converted into metric units using standard conversion ratios. One problematic measure is the chest, the contemporary standard measure for local purchases of “corn” (i.e. Guinea corn, aka sorghum/durra). In his study of price inflation in West Africa, Robin Law assumed that a chest of corn equalled 4 bushels or 32 gallons, simply because this was a standard for British chests at the time (Law 1991; 1992). It does however seem as if the West African chests were considerably larger. William St Clair has found evidence that in 1779, at least, at the Cape Coast Castle, 60 chests of corn equalled 4200 gallons of corn – i.e. 70 gallons per chest (St Clair 2006:76). It is here assumed that this was a quite typical chest size throughout the period.
Textiles were one of the main imports into West Africa, normally sold by the ‘piece’. A number of different qualitites of textiles are present in the accounts. I have here included one of the most coarse and cheap varieties, namely the textile called Guinea stuff. Exactly how large a ‘piece’ of Guinea stuff (or other textiles) was is unfortunately unclear. In one reference I’ve found in the material, for example, three ‘pieces’ of textiles were used to clothe 18 recently purchased slaves. It is however unclear exactly what clothes they could produce from the received pieces, and how typical the example is. Phyllis Martin found that on the Loango Coast, a ‘piece’ of textile was equivalent to six yards of textile (5.5 meters, Martin 1986). Pedro Machado, doing research on the imports of Indian textiles to East and Southeast Africa, has for his part found that the ‘piece’ could vary rather much in this region at least (personal correspondence with professor Machado). A ‘cloth’ imported to Portuguese Mocambique was a rather standardized measure, normally of 8 times 1.5 mãos (3.52 x 0.66 metres). A number of such ‘cloths’ made up one peça (‘piece’) of textile. The exact number of cloths to do so did however vary between the various qualities of textiles imported – everything from 3 to 8 cloths per piece was standard. In the consumer basket, I have now included ½ of a ‘piece’ of Guinea stuff, in order to at least not underestimate the amount of textiles in my basket compared to the amount of textiles included in Allen et al’s basket (3 metres of cotton textiles).

4.4. Geographical delimitation

The source include accounts from a number of forts and factories along the African coast run by the Company – stretching from The Gambia in the west, to Whydah (in present-day Benin) in the east. In this paper, I will only present data from the main fort, Cape Coast Castle, in present-day Ghana. This was the largest fort operated by the Company, thus providing us with the largest sample of both goods and workers in any single year, and the accounts are also most complete from this fort, thus enabling the most complete time series of data.

It is of course not possible to generalize about Africa in general, or perhaps even West Africa, from this case study alone. This case might contribute to increase our knowledge of a part of the world where very little is known about its domestic economic history. Acemoglu and Robinson have argued (although without showing any evidence to support their claim) that pre-colonial Ghana, along with a handful of other regions of Africa, was rich compared to most other parts of Africa (Acemoglu and Robinson 2010). If this is true, we should expect that living standards at the Cape Coast were at least some distance ahead of subsistence level.
5. Data and discussion

N.B. I am in the process of collecting the data from the source, so the following is just to give you an idea of some preliminary results, and the possible implications of these.

5.1. Nominal wages

In the early 18\textsuperscript{th} century, there are only a few free Africans employed by the Company, and I have so far been unable to find any sources documenting the Company slaves at this time. For this period, I do therefore mainly have data on from the two first categories – blue- and white-collar workers of European origin. Over time, the Company does seem to have employed an increasing number of free Africans or people of biracial origin. From the second half of the 18\textsuperscript{th} century, also, the accounts report detailed data on the slaves as well. Graph 1 report the nominal annual wages paid to the workers at the fort of Cape Coast Castle in the year 1760, as a first benchmark. The sample includes in total some 100 free workers (categories 1, 2 and 3), and 200 slaves (category 5). Some of the most highly paid white-collar staff, including the governor-in-chief and others, are not included in the graph, so that we can study the details for the less well-paid labourers in closer detail.

Graph 1. Nominal annual wage for various occupations, 1760 (£)

![Graph showing nominal annual wages for various occupations](image)

Source: British National Archives, T/70/1015

There are large variations in the wages paid to people of various occupations. The highest paid person, the governor-in-chief, received an annual wage of £400 in the year 1760,
whereas an African (slave) ‘swimming boy’ on average only received an annual wage of £3.4. Unsurprisingly, given that the source is a European company, almost all of the highly-skilled and -paid occupations are reserved for people of European origin.

In some of the cases, the Company employed people of different background, status and gender (European/biracial/African, slave/non-slave, men/women) for the same occupation. Writers, soldiers and craftsmen could for example be of European and African (or biracial) origin. Nominally, the people in these groups most often received virtually the same wage on average, provided that the employees were ‘free’ (i.e. non-slave) agents. In real terms, however, the Company discriminated against the African employees: payment was virtually always in kind (e.g. in textiles, tobacco, alcohol or in European provisions), and the price demanded (and noted in the accounts) for the goods varied systematically between Europeans and Africans – the Africans were forced to pay 25-30 per cent more for the goods than the European employees were (i.e. they received a smaller quantity of goods as wage payment in kind, even when the nominal wage was claimed to be the same).

The story was different in those cases where the Company employed a European and had purchased a Company slave for the same occupation. This was the case for example concerning carpenters, gardeners or gunners. In all these cases, the Europeans – not very surprisingly – received three to five times higher nominal wages than the Company slaves occupied with the same task. In real terms, the difference was even bigger since the Africans yet again were forced to pay higher prices for the goods they received in kind. Interestingly, in those cases where the Company on the other hand employed both free Africans, and owned Company slaves, the wage difference was very small. This was the case for example concerning drummers or blacksmiths employed at Cape Coast Castle. In the case of blacksmiths, the slaves were actually paid somewhat higher wages than the free African blacksmiths. The sample of free African labourers is still very small, and the wages paid to individual employees might have an undue influence on these preliminary results. The case does however indicate that the difference in living standards between slaves and many legally ‘free’ African workers might not have been that big. In his qualitative study of the Company slaves at the Cape Coast Castle, Ty Reese has come to a similar conclusion, based upon an estimate made by the local governor of the fort (Reese 2010:368). There does then seem to exist a close link between the wages paid to free and enslaved Africans.

Finally, we have data on the wages of a number of female Company slaves. These women were mainly employed in three occupations: as cooks, washerwomen or labourers. In two of these cases (cook, labourer), we also have data on the wage paid to men with the same occupation. There is a clear pattern of wage discrimination: women were on average only paid half of what the men with the same occupation were paid.

There was some wage differentiation between Company slaves of different occupations. ‘Swimming boys’, along with a number of craftsmen’s helpers and apprentices (‘armourer’s boy’, ‘carpenter’s boy’, ‘canoeboy’ etc) received the lowest wages. There was a small ‘wage
premium’ (of 10-50 per cent compared to the wage of a presumably unskilled labourer) for slaves performing more skill-intensive tasks, such as carpenters, blacksmiths, coopers and bricklayers. A high ‘wage premium’ (40-60 per cent compared to an unskilled labourer) was furthermore paid to two other groups of slaves: ‘gunners’ (i.e. hunters) and sailors. This might not only reflect a skill premium, but also a form of efficiency wage that we might call a ‘loyalty premium’. These were after all people with occupations that by their nature enabled the slaves to run away more easily than the slaves who were working strictly inside the Company forts. The gunners did most probably also, as the name implies, need to carry some form of gun to perform his tasks. By providing a ‘carrot’ in the form of a ‘loyalty bonus’ to the average remunerations to slaves, could potentially earn a higher degree of loyalty from these slaves – reducing any tendency to resist, revolt or run away.

There was also a wage differentiation between women depending on the number of children they had. There was no clear ‘wage premium’ for women who bore many children, as can be seen in table 1. On the one hand, women with one or two children received a slightly higher wage than women who had no children at all. On the other hand, women with three or more children received lower wages to sustain both themselves and all the children than a childless female labourer on average received. This might also partially be an effect of age (i.e. women who had given birth to many children were on average older, and perceived to be less remains). The sample is so far quite small, so further studies will show if the pattern holds once the sample is increased (i.e. when more years are included in the analysis). The figures do however seem to indicate that the Company wasn’t very interested in favouring women that gave birth to (many) children. Presumably, the price of purchasing slaves was so low locally, that there was little interest by the Company in the slave women raising slave children in the forts.

Table 1. Wage differentiation for women with children, 1760

<table>
<thead>
<tr>
<th>No. of children</th>
<th>Nominal wage (£)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>4.44</td>
</tr>
<tr>
<td>1</td>
<td>4.97</td>
</tr>
<tr>
<td>2</td>
<td>5.12</td>
</tr>
<tr>
<td>3</td>
<td>3.09</td>
</tr>
<tr>
<td>4</td>
<td>4.00</td>
</tr>
<tr>
<td>5</td>
<td>3.00</td>
</tr>
</tbody>
</table>

Source: British National Archives, T/70/1015

5.2. Price of goods and the consumer basket

Because of a lack of data on prices for many of the more luxurious goods, I will in this paper only focus upon the ‘subsistence ratio’, and not try to estimate the ‘respectability ratio’ also suggested by Allen et al. Geographical variations are possible, since the essence of the
basket is to get a certain amount of calories and proteins, enough for the daily survival of the consumer, along with a couple of other non-food necessities such as energy and clothes. Table 2 presents the contents of the basket used by Allen et al, and the basket I use in the case of the Cape Coast Castle in West Africa.

Table 2. Subsistence level basket of goods used for calculating welfare ratios

<table>
<thead>
<tr>
<th></th>
<th>Northern Europe</th>
<th>Canton</th>
<th>West Africa</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
</tr>
<tr>
<td>Oats</td>
<td>155 kg</td>
<td>1,657</td>
<td>72</td>
</tr>
<tr>
<td>Rice</td>
<td>171 kg</td>
<td>1,677</td>
<td>47</td>
</tr>
<tr>
<td>Sorghum (“Guinea corn”)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beans/peas</td>
<td>20 kg</td>
<td>187</td>
<td>14</td>
</tr>
<tr>
<td>Yams</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Meat/fish</td>
<td>5 kg</td>
<td>34</td>
<td>3</td>
</tr>
<tr>
<td>Butter</td>
<td>3 kg</td>
<td>60</td>
<td>0</td>
</tr>
<tr>
<td>Oil</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Soap</td>
<td>1.3 kg</td>
<td>1.3</td>
<td>1.3</td>
</tr>
<tr>
<td>Cotton</td>
<td>3 m</td>
<td>3 m</td>
<td>1/2 piece</td>
</tr>
<tr>
<td>Candles</td>
<td>1.3 kg</td>
<td>1.3</td>
<td></td>
</tr>
<tr>
<td>Lamp oil</td>
<td>1.3 kg</td>
<td></td>
<td>1.3</td>
</tr>
<tr>
<td>Tallow</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fuel</td>
<td>3 M BTU</td>
<td>3 M</td>
<td>1.5 M BTU</td>
</tr>
<tr>
<td>Total</td>
<td>1,938</td>
<td>89</td>
<td>1,939</td>
</tr>
</tbody>
</table>

(1) = Quantity (annual consumption)
(2) = Calories (kcal, daily intake)
(3) = Grams of protein (daily intake)


The subsistence level basket of goods I use in the West African case contains sorghum, yams and palm oil as the main food staples, reflecting the main staples produced in the region. A diet based on these staples would be comparatively low in protein content, as can be seen in the table. Whereas the amounts of protein at least are above the daily recommended intake for a grown-up person, the intake would with this diet only be two-third of that one would get from consuming the basket used by Allen et al in the case of Northern Europe (but quite similar to the subsistence basket Allen et al assembled in the case of China).

Instead of lamp oil and candles, I have included the same quantity of tallow, since this was one of the goods sold to African buyers by the Europeans to be used for lighting. Lacking
information on exactly how large a ‘piece’ of textiles normally was, as was mentioned earlier, I have included half a piece of Guinea stuff (a coarse variety of cotton textile from India) in the subsistence ratio basket of goods. I have furthermore reduced the amount of fuel in the West African basket compared to that of Northern Europe, since the tropical climate drastically reduced the amount of fuel necessary for heating of houses. Finally, since the Europeans working at the forts of the Company also seem to have lived at the Company forts (either in individual or shared rooms for the free employees, or in slave barracks), no additional cost of housing has to be added to the basket in their case. Africans – including the Company slaves (Reese 2010) – did on the other live in the African town close to the castle, so they would probably have to pay for their own housing. Lacking data on the cost of housing, I have used the same formula as Allen et al, i.e. adding 5 per cent to the total cost of a single basket (i.e. 15 per cent for a family basket of goods).

5.3. Subsistence ratios

Given the nominal wage and price data assembled from the T/70-series, it is possible to calculate the subsistence ratios in the same manner as Allen et al have done for other regions of the world. Graph 2 show the data for a couple of benchmark years for which I so far have calculated the data, along with Allen’s data from other places in the world. So far, the baskets are based on ‘standard’ prices, not taking into account the fact mentioned previously that the company in actual fact demanded a higher price for the goods that they gave the African workers as wage in kind.
Graph 2. Subsistence ratios Europe, Asia and West Africa

*Note: the subsistence ratios refer to unskilled labourers in the European and Asian cases. In the case of West Africa, three categories of workers are reported in the graph. Source: data for Europe and Asia from Allen 2009: figure 2.3. Data for West Africa based on data assembled from the British National Archives, T/70 (Accounts: Journals: Cape Coast Castle, and Accounts: Day Books: Cape Coast Castle).*

As can be seen in the graph, European soldiers did for the first benchmark years not seem to receive any extreme wage premium for undertaking indenture at the Cape Coast Castle (the subsistence ratio for European soldiers stationed in West Africa was approximately 25-40 per cent higher than it was for an unskilled worker in London during the first half of the century). By 1760, however, real wages had increased considerably, so that a British soldier working on the African coast received a wage roughly 80 per cent higher than he would have received as an unskilled worker in London. This was not, however, due to a rise in nominal wages, but to a fall in price for many of the goods included in the subsistence basket. Further inquiry might reveal if this pattern holds when further years are added to the database.

So far, I have only data for a very small sample of free African craftsmen employed by the Company. The data ought in this case therefore not to be interpreted as showing any trend over time, but rather a general level for this group of workers. Their wages do however seem to have been quite high, if compared either to the wage of many unskilled labourers in other parts of the world or to subsistence level. A craftsman working at the Cape Coast Castle received a wage roughly equivalent to what labourers in Delhi received, and earned considerably more than labourers in Southern Europe at the same time. The real wage levels indicated by the data was approximately 2-2.5 times the cost of a subsistence basket of
goods, meaning that a labourer employed with such a wage could support a small family at subsistence level and still have a small economic surplus. This surplus could be used for different purposes – everything from culturally induced gift-giving to kin, or saving the surplus, to purchasing decencies and/or luxuries for personal consumption. For the international comparison, it has to be kept in mind that the data for other cities refer to unskilled labour, in contrast to the (skilled) craftsmen in West Africa. I have so far no data for free, unskilled West African labourers. There is however data on the wage paid to unskilled slaves classified as ‘labourers’, at least from the second half of the 18th century. In the first year in the sample of slave payments, 1752, the data indicates that wages paid to unskilled slaves hardly covered the cost of a subsistence basket of goods for a family. The data is however a bit uncertain, since there might some wage payments missing in the source (the accounts only start to become systematic by the end of the year). In 1760, however, real wages for slaves were considerably higher – mainly due an increase in the average nominal wage paid to slaves (from £6 to £10 per slave per annum), but also to a fall in the price of a subsistence basket of goods (from roughly £5 to a little more than £4 per annum). Future research will show if the increase is real, or simply due to some missing data in the year 1752.

The tentative conclusion that can be drawn is that the wages paid to the African labourers employed at the Cape Coast Castle during the 18th century might have been comparatively high, viewed in an international context. Provided that these results hold when more years of data are added to the analysis, this would indicate that living standards in the region more broadly might have been quite high above subsistence level, driving up the reservation wage for free workers (and thus, as was argued previously, the efficiency wage of slaves). Such a result would be in line with the results by Austen et al (2011), whose study of human stature of showed that people in northern Ghana were taller than people in southern Europe at the beginning of the 19th century, indicating a quite high biological living standard.

If this is the case, can we perhaps interpret the slave trade to have had similar effects on the precolonial African economies as the Black Death has been claimed to have had in medieval Europe? While the Black Death was devastating for those people who were stricken by the plague, it had also had the unintended and unanticipated effect of creating a shortage of labour in relation to other factors of production, possibly contributing to new economic opportunities and increasing living standards for the survivors of the epidemic (Routt 2008). If a similar situation was the case in early modern Africa, due to the external slave trade, the high wages ought ceteres paribus to have created an incentive to economize on labour, for example by introducing labour-saving technology (see Allen 2009 for a more detailed argumentation of the high-wage economy as a main driving force behind the industrial revolution in Britain). This would however have required capital (both physical and human) and natural resources (such as waterpower or coal). Capital and credit was, according to Gareth Austin, scarce in precolonial West Africa, despite quite efficient credit markets. Interest rates could for that reason often reach prohibitive levels (Austin 1993; Austin 2009).
High cost for capital would have constituted a considerable bottleneck for further economic development in West Africa at the time. A further factor inhibiting economic development in this context might, as many recent scholars mentioned in the background have suggested, have been the insecure social climate created in the wake of the slave trade, with increasing violence and warfare. This would certainly decrease willingness to invest in physical capital, thus creating disincentives for the substitution of capital for labour.

6. Plans for future research/articles

The aim of this paper has been to give an overview of my ongoing research, and primarily the methodological problems faced when doing this. I here want to indicate some of the ideas that I plan to develop further in the future.

Living standards developed

A first step in my future research is to enter more wage and price data in the database, creating a longer (and more complete) series of data for the subsistence ratios in Cape Coast Castle. Secondly, the database could be developed to also include data from some of the other ports along the African coast, for example at The Gambia or Whydah, where the Company also operated – at least for a couple of years (the sources are much less complete for most of these other ports). If the preliminary results reached so far hold up when further data is added, the comparatively high living standard needs an explanation.

Mortality

Philip Curtin has shown that mortality rates among Europeans stationed in the Cape Coast Castle in the 1820s were extremely high - at a rate of 300 to 700 per thousand per annum (Curtin 1968; 1989; 1998). Using my source material, I can study the mortality rate over a long period during the 18th century, since the garrison lists included in the accounts report quite detailed data on the status of the European men in the garrison. I can thereby study if the mortality rate changes over time, and if there for example is any relationship between the mortality rate and wage level (i.e. if there is a wage premium) for the Europeans that accept an indenture at the fort. This could also have implications for the so-called “Reversal of Fortune”-thesis, since the empirical support for this thesis is founded on the European settler mortality rate in various regions of the world (Acemoglu, Johnson and Robinson 2001).
Wage/price discrimination

One large question-mark is that the data from my first benchmark years indicate that slaves received a higher wage than at least some free African workers. If this result remains when more data is added, this would certainly need explanation since most scholars since Adam Smith probably would assume that slaves were less productive than free labourers. One potential explanation is based on Akosua Adoma Perbi, who has claimed that indigenous slaves on the Gold Coast were expected and required to work harder than the free population (Perbi 2004). If this is the case, then the lower wage paid to the free labourers might reflect a situation where they simply worked less (or less hard) than the slaves did, i.e. were less productive. Another reason might be the seasonality of free labour, reducing the reservation wage of free labour during off-peak seasons in agriculture (Austin 2008b). If this is true, we ought to be able to observe a seasonal pattern to when free labour was employed, or to the wages that the Company had to pay. As was described previously, there is also a pattern of wage and price discrimination. This requires further analysis more generally.

Fenoaltea-hypothesis tested

Stefano Fenoaltea (1984) has argued that the institution of slavery was associated with the use of various incentives (both ‘carrots’ and ‘whips’). There was also, he argued, a systematic pattern to the use of incentives, so that ‘carrots’ (e.g. wage payments, social privileges, manumission) were more important where the capital/labour-ratio in the slave-based production was high. So, for example, were various positive incentives more common among slaves working in manufacture and industry, than among plantation slaves. The data from the Cape Coast Castle can provide a further test for the Fenoaltea-hypothesis, since we here have a clear case of efficiency wages to slaves.

7. References


Miers, Suzanne and Igor Kopytoff (eds.): *Slavery in Africa: Historical and Anthropological Perspectives*. Wisconsin: University of Wisconsin Press.


