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Changing income inequality and structural transformation:

The case of Botswana 1936-2010

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1. Introduction

Africa contains some of the highest levels of income inequality in the world (World Bank 2013). Over the recent decades the negative effects of inequality in regard to both sustainable growth of African economies and long-term poverty reduction has been discussed (Hillbom 2008; World Bank 2006). Notwithstanding, high levels of income inequality in the region appears to have started to decline during the last few years. In this current development, Botswana could be considered a forerunner. Traditionally, high levels of inequality in Botswana have been associated with the diamond economy (Good 2008). However, a previous study on social classes and division of income during the colonial era (Bolt and Hillbom 2013a) as well as new results presented in this paper show that the peak of income inequality toke place in the mid-1970s and actually coincided with the switch between the cattle and the diamond economies. The main research questions for this paper are: How can long-term rise and decline in income inequality in

Botswana be explained? How does changes in income inequality relate to a potential structural transformation of the economy?

Applying the arguments of Simon Kuznets (1955) on what drives down levels of income inequality we could expect the explanation to lie in the establishment and development of an industrial sector that is highly productive due to technological advancements. Efficiency allows industrial/urban wages to become higher than agricultural/rural wages and the initial transfer of labour from the low productive agricultural sector to the high productive industrial sector, or from the rural to the urban areas, results in an increase in income inequalities. However, once the majority of the labour force is found in industry, then further transfers will instead mean a decrease in income inequality. Going back to Africa we know that this is a region that generally has experienced limited economic structural transformation and that the majority of economies are still agricultural based. Especially the industrial sector has been very slow to grow and transfers of labour and other resources have mainly taken place between the agricultural and the service sectors and urban populations are growing rapidly. The African economies are then not following the traditional model of structural transformation assumed by economists such as Kuznets (1973). Instead we may have to look at alternative pathways to modernization. This is also true for Botswana. While the diamond sector has been the driver of an economic growth miracle, the sector has engaged a modest work force and has had limited effects on the rest of the industrial sector. When explaining the documented bending of the Kuznets curve in Botswana we then have to expand on the classic Kuznets model to find alternative or modified explanations.

The structure of the paper is as follows: First, we present classical scholarly work on long-term changes in incomes inequality. The next section presents income inequality trends 1936-2010 in Botswana. It is followed by an analysis of the rise and decline of income inequality in relation to three over-riding themes: structural change in the economy, transfer of labour and changes in incomes. The last section concludes.

2. Interpreting the Kuznets curve

Because *equity,* defined as equal opportunities for all and avoidance of absolute deprivation (World Bank 2006:18-19), is a compulsory ingredient of the *development* definition, there is an inseparable link between the two concepts. Equity plays an important role in forwarding

development as it frees people from the poverty trap and strengthens the political institutional structure. By ensuring over-all higher levels of income as well as support of a modern state, the rural poor can afford to turn away from being risk minimisers. Instead, they may become utility optimizers contributing to the economy through their human capital capacities and raised productivity, as well as by bringing considerably increased supply and demand to the domestic market (Lipton 1968). Apart from possible normative positions valuing equity, it can then be argued that there are more objective reasons for fighting high levels of inequality. However, the link between economic growth and development, on the one hand, and levels of income inequality, on the other, are far from clear.

In 1955 Simon Kuznets published his seminal work on long-term change in income inequality. The empirical material included only a few observations from England, Germany and the United States and Kuznets (1955: 26) himself wrote that he was "…acutely conscious of the meagerness of the reliable information presented. The paper is perhaps 5 per cent empirical information and 95 per cent speculation, some of it possible tainted by wishful thinking." Despite this admittedly shaky ground, Kuznets' fundamental argument that income inequality increases with the rise of the industrial revolution only to decrease with continued modernization is still valued, although also challenged, six decades later. The famous Kuznets curve (see figure 1) is taught to students in economics, economic history and development studies, and we generally expect economic development and structural transformation to reduce income inequality while also eradicating poverty.

Kuznets' overall conclusion is that in developed countries, exemplified by England, Germany and United States, long-term change in the relative distribution of income has resulted in higher levels of equality. He pin points the start of these trends to roughly before the WWI and finds that they grew strong in the 1920s, a time when all three countries had already become industrialized. He stresses that his result show incomes before taxes and that he does not take government transfers into consideration. If taxes and transfers were included this would give a different outcome with even greater narrowing of inequality. He finds that decreasing income inequality is accompanied by significant rise in real incomes. Although they are connected it is important not to equate poverty eradication and decreasing income inequality. The whole of society can be better off and people at the bottom can move out of poverty without there necessarily being less income inequality. However, when income inequality is declining this

means that the bottom income groups are increasing their incomes at a faster pace than the top ones and usually they simultaneously move out of poverty.

The prime explanation offered by Kuznets for long-term decrease in income inequality is the thorough modernization of the economy, i.e. the completed shift away from an agriculture based economy and into industrialization and urbanization. The argument is that the average per capita income in the rural areas are lower than in the urban population and that income inequality within the rural population is more modest than that within the urban population. Hence, in the first stage inequality as well as income per capita increases as people move from the relative 'equal' low income rural employment to the relatively 'unequal' urban sector offering higher wages. This phase stresses both the rural-urban divide and the improved earnings due to the shift of labour from a low to a high productive sector. In the second phase the majority of the population is employed in industry or service sector in the urban areas and the rural-urban divide becomes less influential. The average income per capita increases further and inequalities within the urban sector remain. These processes result in an inverted u-shaped curve famously called the Kuznets curve.

Figure 1: The Kuznets curve
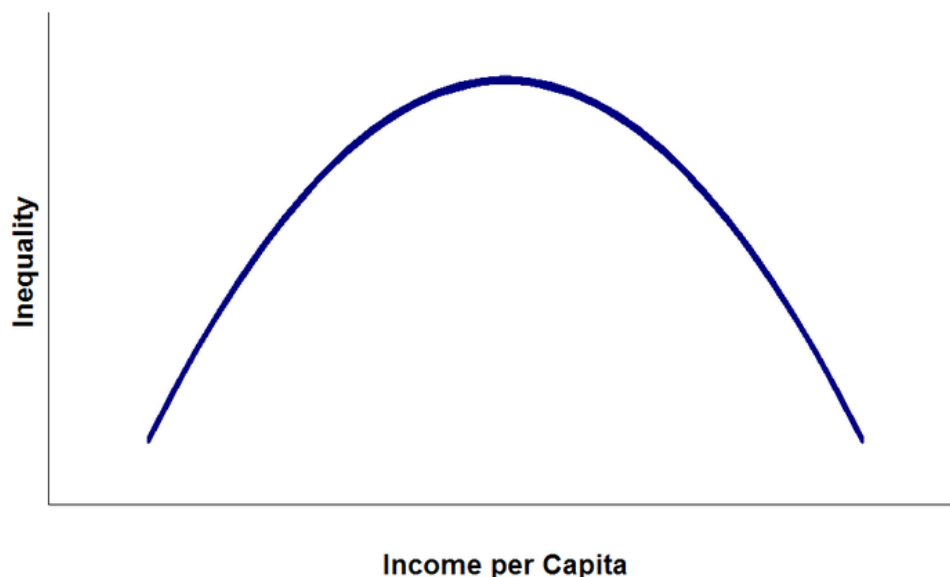
Both the rise in inequality and the bending of the curve, with the consequent decline in inequality, is then related to the structural transformation of the economy. Kuznets (1973) argued

that in our time the end goal for any society is to reach Modern Economic Growth, MEG, thereby leaving the pre-modern growth process behind. MEG marks a distinct economic epoch and is separated from the pre-modern structure by six characteristics: 1) high rates of growth of per capita and population 2) high rate of rise in productivity 3) high rate of structural transformation of the economy 4) rapid change in social and ideological structures 5) participation in a globalized economy and 6) a minimum level of modern technology. At the same time as MEG represent a new structure it also comprises the continuation of old trends, although in an accelerated form, and this makes a distinction of the break between the pre-modern and the modern complicated to identify and analyze (Kuznets 1973:248-249). Depending on its causes and characteristics growth can be more or less likely to forward such processes of structural change and societies can experience growth while staying pre-modern. Technological advance, productivity increase and structural change in patterns of production raises the income levels while distribution of resources and incomes via a modernized institutional structure leads to widespread improvements in human conditions. Turning to Arthur Lewis (1954), another development economist, he argues in a similar vein that economic growth and development is accompanied by increasing per capita income (on the x-axis of the Kuznets curve) as labour moves from low productive agriculture to the high productive industrial sector. It is then in the nature of development that all segments of society significantly benefit from economic gains.

However, developing countries, such as Botswana, having significant mineral resources and being land abundant tend to be less equal in both income and resource distribution than other economies (Bourguignon and Morrisson 1990:1127-1128). Such types are not representative in Kuznets' original model of MEG where they are reduced to being atypical cases. Building on Kuznets, using comparative history and comparative economic development Adelman and Morris (1997:833) elaborates on the modernization argument taking the position that all processes of economic development are multifaceted and non-linear. In their categorization, Botswana falls into a typology of agricultural, primary-export oriented, sharply dualistic, and land abundant countries. Within this group the characteristics of existing natural resource endowments and degrees of government autonomy from tribal domestic elites and colonial powers determine patterns and sequence of structural change. The conventional Botswana success story (Acemoglu et al. 2003; Leith 2005; Samatar 1999) rests on significant growth rates due to high earnings from diamond exports. However, in-depth analysis has shown that the growth trajectory has

corresponded to only two out of the six characteristics of MEG, and consequently it has been argued that Botswana is a case of pre-modern growth without sustainable economic development and structural transformation (Hillbom 2008).

The lack of MEG does not, however, invalidate a Kuznets inspired analysis of long-term changes in inequality in Botswana. There already exist alternative interpretations of the relationship between rise and decline of incomes inequality and the modernization process. Van Zanden (1995) has claimed that increasing inequality starts already with pre-modern economic growth. In his investigation into long-term changing inequality in early modern Europe he collects and compares Gini coefficients from a number of cities in late medieval and early modern Europe. He concludes that economic development, urbanization and capital accumulation already during this period coincided with increasing inequality. Consequently, he proposes that a 'super Kuznets curve' starting already in the early modern era and stretching over a longer period of time than proposed by Kuznets himself would give an upward trend starting in the 16th century. Inequality continued to increase until the 19th century to shift into the downward phase in the 20th century. Potentially, a 'super Kuznets curve' could also be identified for Botswana. While it would not be covering centuries, it would cover the whole process of both increasing and declining income inequality and, considering the potential lack of MEG, it would force us to consider alternative pathways to how 'modernity' drives changes in inequality.

### 3. Botswana's long-term change in income inequality

In a previous paper we argue that high levels of income inequality in Botswana are not a post-independence phenomenon and we trace its roots back to the colonial era (Bolt and Hillbom 2013a). We do that by constructing four social tables for the Bechuanaland Protectorate from 1936s to 1964s. Concretely, we identify social classes based on occupation, we estimate the share of population per class and we compute mean incomes for each class, using both colonial and anthropological records. Combining this with information about the costs of living at subsistence, we determine changes in the welfare ratio, i.e. the number of family consumption baskets that can be bought with existing incomes on an annual basis. With changing welfare ratios we capture changes in division of incomes between social classes over time.

Our study bares a significant resemblance to that of Kuznets' seminal paper from 1955. Kuznets study was based on four intentions: to record and group incomes for family expenditure units according to secular income; to cover the full distribution in an economy; to not include incomes that are not associated with full-time, full-fledged participation in economic activity; and to include all types of incomes also those in-kind but excluding capital gains. In Bolt and Hillbom (2013a) we follow the same set-up with the exception that we do include capital gains in the form of increasing wealth coming from cattle off-springs. Further, Kuznets aims to follow units as they move between income groups over time, i.e. to map social mobility. Finally, by connecting the incomes of a given generation with those of their immediate descent he also has the ambition to capture intergenerational change. In our own paper we do not, however, have the ambition of capturing neither social mobility, nor intergenerational change.

Our results are summarized in figure 2 below, showing Lorenz curves for the four consecutive decades from 1936 to 1964. The further the curve shifts away from the 45 degrees line representing full equality, the smaller the share of the population generating most of the surplus income and the higher is the level of inequality. Figure 2 then clearly shows a rise in inequality in Bechuanaland from the 1940s onward, indicating a concentration of increasing surplus income in the hands of a few. We conclude that increasing inequality is linked to the development of the beef export sector as well as an increasing public-private divide (Bolt and Hillbom 2013a). A brief explanation of the results is presented here and in the following sections we offer a more elaborate analysis of the changing economic structures. The beef export sector was established in the 1930s and in its initial stages both the large scale and medium scale cattle holders (together representing 30 per cent of the population) benefited from increased opportunity to earn income by selling off cattle. However, once the export sector fully expanded in the 1940s, access to agricultural resources became increasingly concentrated in the hands of the large scale cattle holders. In combination with periods of drought and disease in the 1930s and 1960s, especially negatively affecting the herds of the medium- and small-scale cattle holders, the share of people living at subsistence or just above substantially increased throughout the period of investigation. Meanwhile, the large scale cattle holders saw their incomes increase rapidly. Additionally, indviduals working for the colonial government, representing a very small part of the population, received increasing salaries with the expansion of the colonial administration basing its incomes on the success of beef exports.

Figure 2: Lorenz curves
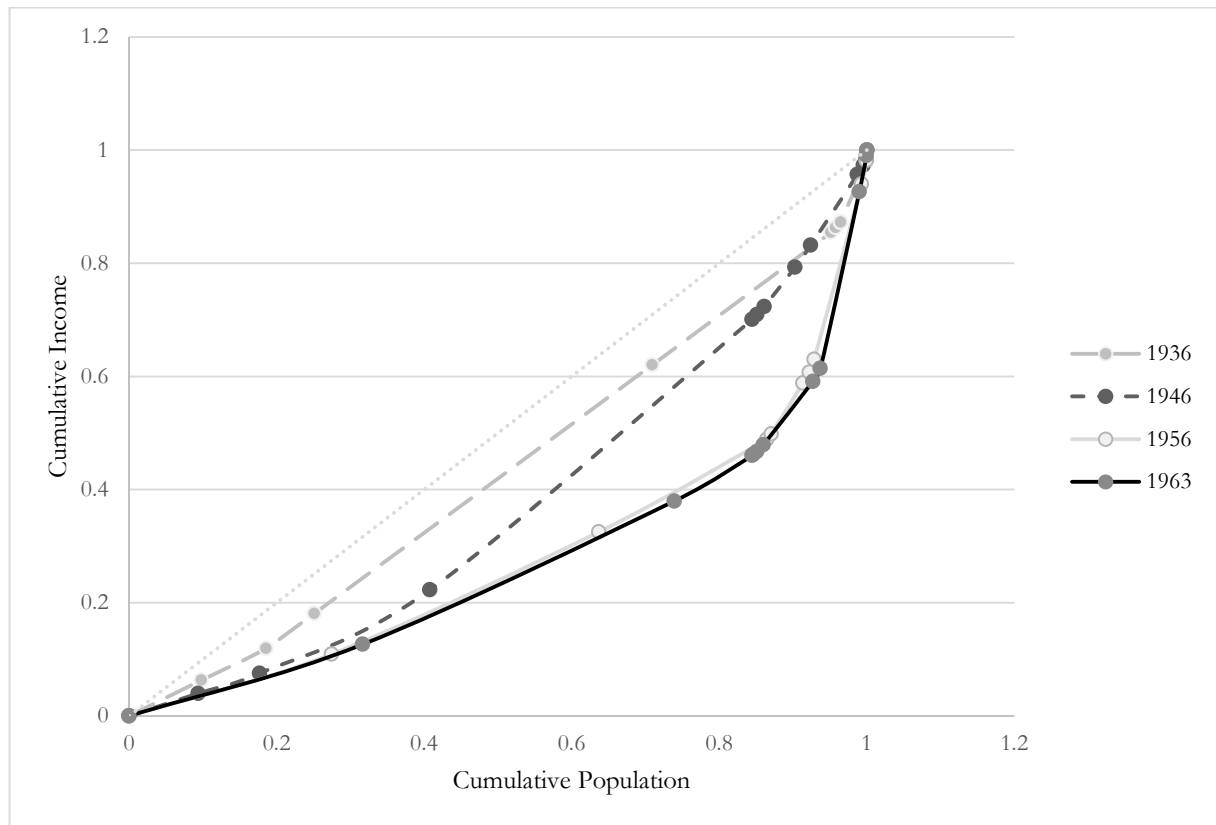
The high levels of inequality that we have demonstrated for the colonial cattle economy continued to be an important characteristic of the post-independence diamond economy. In the mid-1970s, at the time when diamond incomes started to dominated Botswana's economy, replacing beef exports as the most important source of government revenue, the country exhibited an exceptionally high Gini of 0.73 (Good 1992: 79). However, this trend was curbed to 0.63 in 1993 (World Bank 2013) and continued to decline to just above 0.5 at present (IMF 2013). While levels of inequality are still high in an international comparison it is interesting to conclude that there has been a significant reduction over the last four decades. When we turn the results of our social tables and Lorenz curves into estimated Gini and combine them with official World Bank statistics, we are able to present a 'super Kuznets curve' (see figure 3) stretching over almost eight decades, from the 1930s to the 2010s. While it may not be covering centuries, as van Zanden (1995) does in his own work on pre-modern Europe, it is to the best of our knowledge the

longest running Gini for any African country. It captures the full process of raising income inequality starting in the 1940s as well as the timing of the bending of the Kuznets curve from the 1970s onwards.

Figure 3: Botswana's long-term Gini trend, 1936-2010
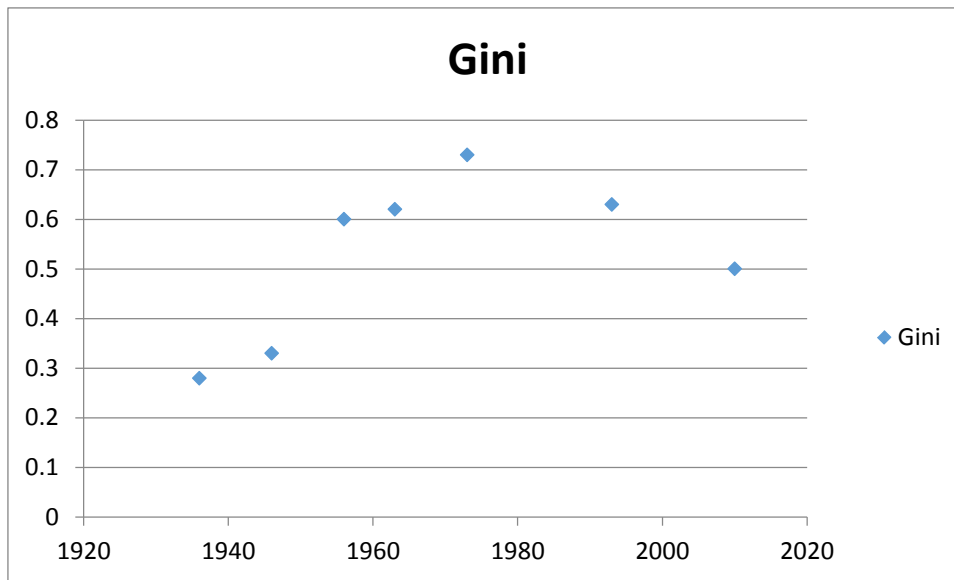
Sources: Colonial Blue Books; Good 199?; World Bank 2013

As we can see from the Ginis entered in the above figure 3, there is a clear trend over the last almost 80 years in the shape of an inverted U-curve. Botswana's long-term changes in income inequality thereby follow the stipulation of the Kuznets curve.

Table 1: Botswana's Gini, 1936-2010

Year	Gini
1936	0.28
1946	0.33
1956	0.60
1963	0.62
1973	0.73
1993	0.63
2010	0.50

Sources: Colonial Blue Books; Good 199?; World Bank 2013

Going into more detail with the numbers there are two occurrences that we would like to highlight. First, the significant jump in income inequality between 1946 and 1956, increasing from 0.33 to 0.6 respectively. We would argue that this substantial increase in just a decade is explained by the new opportunities for the large scale cattle holder to turn their wealth in cattle into cash incomes as the beef export sector develops. Second, the fact that the height of income inequality is found in the mid-1970s, hence at the same time as the swift from the agricultural based cattle economy to the diamond economy. This last finding means that we will have to go against a common view that high levels of inequality in Botswana is should be associated with the diamond economy.

4. Botswana's rise and decline in income inequality

Now that both the rise and the decline of inequality in colonial and post-colonial Botswana has been documented the time has come to expand on the analysis. We will put our results in relation to a potential structural transformation of the economy as well as discuss alternative pathways to modernization. Relying on Kuznets (1955, 1973) theories we could expect that the move away from an agricultural based economy, urbanization and improving incomes would be the main driver of changes in income inequality. Consequently, they are the three themes for our following sub-sections.

4.1 From cattle to diamonds

Our analysis of economic structural transformation will become clearer if we divide history up into time periods based on change in economic structures, instead of according to political events. Consequently, we will follow a periodization already presented in an earlier paper defining the pre-colonial economy to be stretching until 1930, followed by the colonial cattle economy between 1930 and 1975, and finally, the post-independence diamond economy from 1975 to the present (Hillbom 2013). We will match these three economic periods with changes in income inequality as well as discuss if changes in economic structures actually have amassed to a structural transformation of the economy as envisioned by Kuznets.

4.1.1 Pre-colonial economy, -1930

When discussing the timing of the Kuznets curve our point of departure is an agricultural based economy where differences in divisions of incomes are low. In the case of Botswana that means going back to the pre-colonial agricultural economy. In the pre-colonial era the Tswana were agro-pastoralists practicing an extensive agricultural system based on a combination of crop farming and cattle rearing. While land was abundant, access to water resources was the primary limiting factor for both crop farming and cattle rearing (Emongor, 2006). Both resources were, as an overriding principle, the communal property of the *morafe*[1] and held in trust by the *kgosi*[2]. Male household heads were granted private user rights to specific land sites, such as to the residential plots, arable land and the cattle posts (Mgadla, 1998; Schapera, 1994). These regimes exhibited strong communal property rights principles and they coincided with other property rights institutions governing natural resources in pre-colonial Africa (Berry, 1993; Ensminger, 1997; Perrings, 1992).

Meanwhile, cattle were either held in common by the *morafe* and managed by the *kgosi*, or held as private property belonging to wealthy members of society. Whoever controlled cattle could use them to build patron–client relationships through *mafisa*, a system of lending out animals to cattle-less subjects and relatives on a long-term basis. The recipient gained access to milk and draft power, as well as ownership of potential future offspring, while the lender could claim both labour and political loyalty in return (Schapera, 1994). An individual's ability to control or own cattle became the basis for both economic wealth and social status.

Pre-colonial Tswana societies cannot be considered equal in terms of neither social and political status, nor wealth. There is anthropological evidence that the ruling tribal elite, consisting on the family of the chief and other aristocrats and wealthy men, could use their position to amass agricultural resources, improve their stock, and so on. It has been noted that the commoners' property and labour cold be appropriated by the chief and that patron-client relationships that on the surface seemed to be built on reciprocity also contained inequality (Iliffe 1987: 87; Wylie 1990: 23-50). As much as 90 per cent of the population held cattle, but herd sizes ranged from a couple of animals to several thousands. As there was no outlet for selling

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[1] Setswana word or tribe, merafe in plural.
[2] Setswana word for chief, dikgosi in plural.

cattle, institutional inequality and unequal opportunities to amass wealth in the form of cattle did not, however, translate into equivalent levels of income inequality.

Notwithstanding, in the construction of our social tables on which we build our Ginis we have made an effort to take the amassment of cattle wealth into account. First, we argue that anyone holding cattle has an advantage over the group of cattle less in society, as s/he has access to in kind incomes in the form of milk and meat. Further, cattle holders will benefit in their crop farming as they have access to draft animals. These first two types of benefits do not, however, provide a differentiation in incomes within the large group of cattle holders and all cattle holders are assumed to have a basic welfare ration of at least 1.5. When we also include incomes in the form of rents derived by the rent coming from the wealth in cattle we can differentiate within the group of cattle holders and this gives us a span in welfare ration from 1.5 and upwards. That being said, in terms of income inequality the pre-colonial society is fairly equal which is also demonstrated by our Gini of 0.28 in 1936.

4.1.2 Colonial cattle economy, 1930-1975

Because the early colonial years 1885-1930 were focused on establishment of colonial rule and taxation they can be equated with limited colonial influence on economic structures and therefore a continued dominance of the pre-colonial economy (Hillbom 2013). However, from the 1930s onwards the British colonial ambition generally across Africa was significantly enhanced. It was a time when colonial administrations started forming policies for investments and made efforts to bring socio-economic development (Cooper 2002). Bechuanaland Protectorate was no exception.

The most profound change of economic structures having implications for income inequality during the colonial era was the creation of the beef export sector. Given that animal husbandry and especially the owning of cattle was the core of the pre-colonial Tswana agricultural economy, beef exports were identified as the comparative advantage of the Protectorate (Colough and McCarthy 1980; Parsons and Crowder 1988). The primary obstacle for expanding the cattle sector was access to water in the drier areas of the grazing range and colonial efforts before World War II focused on borehole drilling schemes. Initiatives did not come only from the colonial administration, but also from the Tswana leaders. Once constructed, boreholes were handed over to individuals or syndicates representing a limited number of relatively influential and wealthy members of Tswana society. The result was an increasingly unequal

division of water resources and because controlling water meant controlling the grazing range and securing necessary natural resources for keeping cattle, this over time furthered an increasing polarization of cattle ownership (Hillbom 2010).

The polarization meant that the share of medium scale cattle holders decreased while the share of the population who was small scare cattle holders or cattle-less increased (Bolt and Hillbom 2013a). Moreover, the polarization process was furthered by harsh natural circumstances as the Protectorate experienced periods of severe droughts as well as incidences of foot and mouth diseases, especially in the 1930s and the 1960s, which negatively affected particularly the herds of the medium and small scale cattle owners (Good 1993; Roe 1980). The average size of the herds held by medium sized cattle holders decreased significantly during these periods, making them even more vulnerable. Meanwhile, the average herd size of the large scale cattle holders continued to increase. Another important factor driving increasing inequality in incomes and wealth as it favoured the large scale cattle holders, was the significant increase in cattle prices. In the mid-1960s, just before independence, cattle prices were nearly five times higher than they were in 1930. Given that exports were nearly completely concentrated in the hands of the large scale cattle owners, this group profited the most from the economic expansion of the cattle sector (Bolt and Hillbom 2013a). The cattle sector came to dominate the economy and by the time of independence in 1966 beef represented 85 per cent of total export earnings (Colcough and McCarthy 1980: 32; Harvey and Lewis 1990: 78-82).

The second group driving increasing income inequalities during the era of the colonial cattle economy was the government officials – mostly the Europeans and to a lesser extend also the Africans – as they received significantly improved salaries. The welfare ratio of the European officials varied between 20 and 36 and while the Europeans only represented less that 0.5 per cent of the population throughout the period, Europeans earned between 17 and 30 times as much compared to when incomes would be distributed evenly over the population. These European officials eventually constituted a group that controlled a substantial share of surplus incomes. Meanwhile, African government administrators also experienced a continuous increase in wages and in welfare ratio, from 2.6 in 1946 to 9.7 in 1964. Also, more people as percentage of the population were employed by the government, albeit it was still only 1 per cent at the end of the colonial period. The combination of the increase in welfare and in share of the population jointly led to a strong increase in their share of surplus income. This is also an interesting finding when

considering the long-term implications for the public-private divide and that while it apparently became increasingly profitable to be employed in the public sector, surplus controlled by labourers and traders within the private sector remained low and stable.

We have then increasing income inequalities due to: First, increasing polarization of cattle ownership with both declining share of medium scale cattle holders and growing percentage numbers of small scale cattle holders and cattle less. Second, winners in the form of increasing amassment of agricultural resources and cattle wealth in the hands of the large scale cattle holders and improved salaries for government officials. In the theories of Kuznets increasing income inequality is driven by the start of the industrialization process and increasing salaries as people move from the low productive agricultural sector to the high productive industrial sector. We must then ask – is there a proto-industrial or industrial process associated with the establishment and development of the colonial cattle economy? The answer must be that the colonial beef export sector is still part of a pre-modern agricultural based economy. First, although we could assume that there is some increase in the off-take rates productivity is too low to warrant the cattle sector to be deemed a 'capitalist' sector. Further, for the first couple of decades there is no processing industry associated with beef exports. Then in 1954 one abattoir is constructed, but this is after the first surge in income inequality and it has very limited repercussions on the economy at large. Finally, the expansion of the service sector is based on increasing government revenues from a low productive agricultural based economy, not efficient industrial production.

4.1.3 Post-independence diamond economy, 1975-2013

Prior to independence the contribution of the mining sector to national GDP was trivial, but this changed when diamond deposits were annonced in 1967. After a few years diamond mining started on a larger scale and in 1973 the mining sector's contribution to GDP was 11 per cent. After roughly a decade's build-up the mining sector's contribution had grown to 23 per cent of GDP, and it was to increase further (Gaolathe, 1997: 408; Table 2). Figure 4 shows how agriculture, namely the cattle sector, measured as a value added percentage of GDP, plunged drastically from the mid-1960s to the mid-1980s and since then has stayed at very low levels. Meanwhile, industry, namely diamond mining, experienced just as dramatic a surge during the same time period and has remained the primary productive sector in the economy. Following

from figure 4, 1975 is identified as the breaking-point between the colonial cattle economy and the post-independence diamond-led economy.

Figure 4: Agriculture, industry and service sectors, value added (% of GDP) 1960-2011
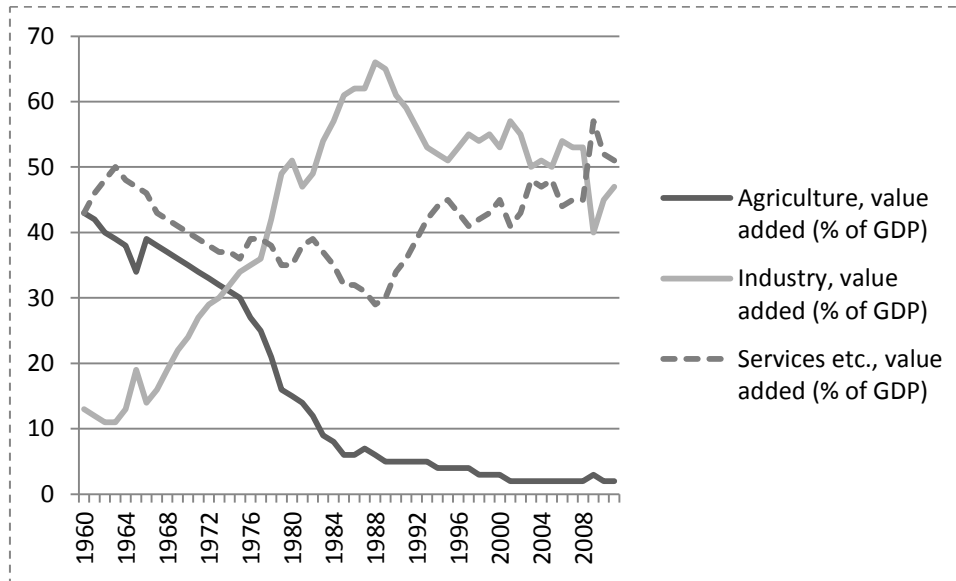
Source: World Bank 2012.

Commonly, high levels of inequality in Botswana are associated with the diamond economy of the independence era (Good 2008). However, an analysis of the raise and decline of the Gini in figure 3 and the structural change of the economy, form being agricultural based to becoming a diamond economy, in figure 4 clearly shown that this assumption must be re-evaluated. Income inequalities increased during the colonial cattle economy from the establishment of the beef export sector's take-off in the 1940s and reached a peak in the mid-1970s, i.e. at the time of the switch to the diamond economy, and have since been declining. The fundamental question is then: Can the bending of the curve be attributed to further industrialization and structural transformation of the economy as proposed by Kuznets?

The answer to that question must be – no. Instead, Botswana's independence economy has become trapped in a natural resource dependency that is connected to failures to diversify the economy (Hillbom 2008). Since independence, the industrial sector has grown significantly, by roughly 18 percent per annum in the decade 1970-80, 9 percent 1980-93 and 8 percent in 2008. At present the sector constitutes roughly 53 percent of GDP. However, industrial growth is

mainly due to the expansion of the mining sector generally and the diamond sector specifically. For a better understanding of the development of the industrial sector as a strategy for diversification of the economy, it is instead the manufacturing sector that is of relevance. Although the manufacturing sector has grown in absolute terms, it persists at roughly 3 percent of GDP. This is the same share the sector had at independence and the trend has been falling over the last two decades. In comparison it can be noted that in South Africa, the oldest industrialising country on the sub-continent, manufacturing is 17 percent of GDP and in Mauritius, another aspiring African economic growth miracle, it is 15 percent of GDP.

Perhaps more disturbing than the lack of structural transformation of the economy itself is that the government has not been unaware of the problem. From the start of the independence era, the importance of diversification was emphasized and over the years a number of schemes to support entrepreneurial activities have been launched. The National Development Bank, NDB, was established in 1965 to provide loans to small scale entrepreneurs in general and within the agricultural sector in particular. Botswana Development Corporation, BDC, was a venture capital company set up in 1970 to further complement the commercial banks. Both are owned 100 percent by the Botswana government. The most high profile incentive program was the Financial Assistance Policy, FAP, (running 1982-2001), which was projected to promote and expand employment-intensive and non-traditional businesses. Unfortunately these and other government schemes aimed at encouraging private entrepreneurship have become subject to increasing abuse by both government employers and recipients, and subsequently they have failed to meet with initial expectations. Further, Botswana is ranked as being 'mostly free' in the 2010 Economic Freedom Ranking, which is better than most African and East Asian countries and therefore the lack of diversification does not appear to be explained by high transaction costs for setting up businesses.

As mentioned above, at independence beef represented 85 per cent of Bechuanaland's total export earnings, but in 2006 the figure had dropped 2 per cent (Colcough and McCarthy 1980:32; Harvey and Lewis 1990:78-82; Leith 1997:530; Republic of Botswana 2007). Further, there is a continuing polarization of agricultural resources and the percentage of cattle less rural dwellers has increased for over half a century. In the early 1990s roughly half of rural households had no cattle while five per cent owned 50 per cent of the national herd (Gulbrandsen 1996: 3). With the failure of manufacturing and the decline of the agricultural sector, it is the service sector that has

expanded during recent decades. At present it constitutes 45 per cent of GDP. It threatens to become the largest sector of the economy and it is paid for, directly and indirectly, by incomes from diamond exports. Incomes that allow for increased demand from government and the public for services and goods, however, it is characterized by low productivity. Diamond incomes have paid for social development and the government has spent about 40 per cent of its GDP on investments, primarily in infrastructure and human capital, a figure that is one of the highest in Africa and comparable to Norway (Acemoglu et al., 2003: 85).

In the general model for MEG productivity increase in subsistence agriculture resulting in the agricultural transformation should accumulate capital and free labour that could move over to industry and other capitalist sectors, thereby becoming a starting point for structural change (see e.g. Lewis 1954; Mellor 1986). When the agricultural sector is failing to fill its role as the engine of MEG other more successful sectors, in the case of Botswana the mining industry, could substitute for its shortcomings in forming capital thereby becoming the engine of development (Gerschenkron 1962). Despite impressive growth, political stability, improved infrastructure, prudent financial management, material modernization, and investments in human capital Botswana is at present also experiencing a decline in population, there is no significant increase in productivity, little economic-, social, or ideological transformation, and sporadic introduction of high levels of modern technology. Hence, four out of six characteristics of MEG are missing and the inference must be that contemporary Botswana with its diamond-led economy is a case of pre-modern growth.

If we conclude that Botswana's economic growth during the last half a decade has not been transformed into MEG, then we have to look for an alternative to Kuznets theory on the relationship between economic structural transformation and long-term changes in income inequality. Van Zanden (1995) has argued that increasing inequality in Europe took place before industrialization, during the pre-modern economy. Looking at the period of increasing inequality 1936-1973 when the Botswana society was characterized as an agricultural based cattle economy this seems to resemble the case presented by van Zanden, a case of pre-modern growth. The conclusion would then be that increasing inequality is a pre-modern phenomenon while decreasing income inequality is driven by a natural resource dependent economy that does not fulfill the requirements of MEG, but has the ability to carry growing public and private service sectors. However, before closing the case we should have a look at other aspects of the

modernization process and see what happens if we go broader than economic structural transformation.

4.2 Transfer of labour

An important aspect of the modernization process is the transfer of labour from the low productive traditional sector, i.e. agriculture, to high productive capitalist sectors, commonly meaning industry but where the service sector and a modern agriculture are also possible options. The discussion of the transfer of labour is most clear in Arthur Lewis writings on the allocation of surplus labour. Lewis (1954, 1979) stipulates a closed economy where population is large relative to capital and natural resources and, consequently, there is an unlimited supply of labour. As this labour leaves the subsistence sector where the marginal productivity is negligible, zero, or even negative and moves into the capitalist sector with significantly higher productivity, structural change and economic modernization is realized.

There is another aspect of the mobility of labour. In his 1955 article, Kuznets alternated between the terms 'industrialization' and 'urbanization', the latter also being a strong, although perhaps social rather than economic, aspect of the modernization process of any country. We will therefore investigate the correlation between urbanization and long-term changes in income inequality in Botswana.

4.2.1 From agriculture to industry and service sectors

During the early colonial period two interconnected processes of change influenced the economic structures of the Tswana states: labour migration to the mines in the future Union of South Africa and the introduction of colonial and native taxes in Bechuanaland Protectorate. The regional expansion of the mining sector from the 1860s onwards attracted labour from the whole of the Southern African region. There were few other opportunities for waged labour and salaries could be generous, fluctuating between 20 and 64 shillings per month in the years 1888–1904, depending on labour demand (Parsons 1993). At first migration was modest and mostly motivated by the gun trade, but after the introduction of colonial taxes in 1899 it increased significantly. Migration became of such magnitude that labour became a scarce factor of production in the Protectorate to the point that it affected agricultural production negatively. Population was still at a low 265,000 in the mid-1930s (Blue Books 1936/37) and in many areas

in the south even half of the productive population could be absent in the 1920s and 1930s (Parsons 1993; Ramsey et al. 1996: 206–208, 211; Schapera 1994). Individuals to a large extent also migrated in order to take up employment as farm hands and domestic helps. Before the cattle export sector took off at the end of the 1930s, migrant labour constituted the main source of cash income and the earnings of these labourers was at a welfare ratio of 2.5. The surplus helped cattle less and smallholders to stay above subsistence thereby giving migrant families an advantage over others within the same social class.

The first wave of labour transfer was then about labour moving from the domestic agricultural sector to foreign mining industry in neighbouring South Africa. Domestic wage employment opportunities in general and specifically within the private, manufacturing sector continued to be very limited during the colonial era. Further, very few wage labourers constituted an actual proletariat in the sense of lacking control over any means of production. Rather, the majority retained access to agricultural resources for crop farming and cattle rearing, and they moved temporarily between their home village and the place of employment. Labourers were primarily recruited from rural households with few or no cattle in the rural areas and many used their savings to buy cattle as they returned home (Morapedi 1999).

Meanwhile, skilled labour in the domestic formal private sector also represents a limited group. In 1932, only 15 individuals were recorded to work in trade, increasing to up to around 200 in 1946. In the trade sector, 550 people were active in 1946 while the number of traders increased to 2,000 in 1958 and 3150 in 1963 (various Blue Books and Annual Yearbooks). In tables 2 and 3 we can see the development of the share of the population working in the private sector or industry. It is clear that numbers are modest throughout the colonial era, not exceeding 6 per cent. It is then far-fetched to call this a period of transfer of labour as a result of a proto-industrialization process, which would be in line with Kuznets. Again, we are back to van Zanden (1995) timing increasing income inequalities with the pre-modern society. Even after the take-off of the diamond economy no more that 15-20 per cent of the population has worked in industry at any point in time and therefore the decline in income inequality since the mid-1970s can also not be attributed to a Kuznets model where the majority of the work force should be in industry.

Table 2: Allocation of the labour force, 1936-1964

	Percentage of the population			
	1936	1946	1956	1964
Agriculture				
Large scale cattle holders	4.9	4.0	4.7	4.0
Medium scale cattle holders	34.0	25.0	16.8	8.0
Small scale cattle holders	17.9	13.0	26.7	32.0
Cattle less	7.3	5.0	20.2	24.0
Bonded labour	6.5	5.0		
Farm hands	0.3	1.0	0.6	0.6
Total	**70.9**	**53.0**	**69.0**	**68.6**
Industry				
Mining		1.0		0.1
Mines South Africa	1.7	2.0	3.2	5.1
Skilled labour	0.01	0.2	0.5	0.8
Total	**1.71**	**3.2**	**3.7**	**6.0**
Service sector				
Domestic	0.3	0.4	0.4	0.4
African government officials		0.5	0.5	0.7
European government officials	0.03	0.06	0.05	0.04
Total	**0.33**	**0.96**	**0.95**	**1.14**
Unspecified	25.9	14.0	26.4	24.3
Children		17.0		
Total population	**315,137**	**382,602**	**478,090**	**549,510**

Source: Bolt and Hillbom 2013a, Table 1.

Table 3: Percentage of total employment in agriculture, industry and service services

	Percentage of total employment										
	1936	1946	1956	1964	1985	1996	1998	2000	2001	2003	2006
Agriculture	70.9	53.0	69.0	68.6	57.90	15.6	20.4	19.7	12.4	21.2	29.9
Industry	1.71	3.2	3.7	6.0	10.60	25.6	21.9	20.9	25.5	22.6	15.2
Services	0.33	0.96	0.95	1.14	31.40	58.7	56.1	58.2	61.4	56.1	54.9

Sources: Colonial Blue Books; World Bank Indicators 2013

While the share of the population working in industry has been modest even during the diamond economy, a more radical transfer of labour seems to have taken place between agriculture and the

service sector. The growth of the service sector since independence is astounding. In 1905, there were 15 European officials employed by the colonial government, ranging from the Resident Commissioner to clerks. There were also 51 European police officers employed. The number of officials (excluding the police force) employed increased with more ambitious colonial strategies, e.g. tax collection and export sector development, to 30 in 1906, to 42 in 1915, to over 80 in 1930, to 120 in 1936, to 224 in 1947 (various Blue Books and Annual Yearbooks). Meanwhile, in 1946, 1,050 Africans were working for the government service, of which 153 for the police. The number of people working for the government increased to 2500 in 1958 (various Blue Books and annual yearbooks). The lower ranking Tswana government administrators are likely to be well connected to the rural areas and the agricultural sector via extended family, including being part of social networks of reciprocity and receiving some incomes in kind from agriculture, also when they primarily reside in urban settlements.

While services were very modest during the colonial era, just as the case of industry, it takes off after the establishment of the diamond economy and during the last odd-decade 50-60 per cent of the total work force has been engaged in the service sector while agriculture has declined from its position as the dominant sector of the economy to only employing 20-30 per cent of the population (see table 3). We then have to consider an alternative explanation to the decrease in income inequality – that the majority of the labour force does not have to be active within industry because being active within the service sector has the same kind of impact. The problem from a MEG point of view is though that the service sector generally is not as productive as industry. Without a highly profitable natural resource such as diamonds, where would the societal wealth be accumulated to pay for increasing per capita incomes?


4.2.2 Urbanization

Botswana has been urbanizing quickly for the last four decades and has moved from 4 per cent living in urban settlements at independence (Gulbrandsen 1996:19) to above 60 per cent presently (World Bank 2013). This could be viewed as a sign of structural change, but although urbanization entails a profound reorganization of the population and has implications for various aspects of human development it is not per definition equal to growth of neither the industrial, nor the capitalist sectors wherein high productivity is found. Lewis' (1954) original model is often misunderstood and quoted as an argument for economic development being centered on a

process of labour moving from agriculture to industry and of urbanization equaling industrialization. However, the focus is on labour transfer from traditional/subsistance to capitalist sectors and any sector (agriculture, industry and services) can become capitalist as long as productivity increases sufficiently. Meanwhile, the subsistence sector is primarily associated with pre-modern agriculture, but it is a common feature in developing countries that subsistence sectors are expanding also in urban areas, the most evident case being informal self-employment. Botswana's prime engine of growth, the diamond sector, is neither located in the urban areas, nor does it have significant links to other sectors of industry. The urban settlements are instead attracting labour that finds employment within the government administration, service sector, household employment, trade, and so on, some of it in the formal and some in the informal sector. Labour is then to a significant degree moving from subsistence agriculture to non-capitalist urban sectors and becoming yet another indicator that MEG are not present although there is a social transformation due to urbanization.

From a structural transformation point of view it is clear that raising income inequality in the era 1936-1975 took place while the share of total population living in urban settlements was still very modest. Throughout the colonial era no more than 3-4 per cent lived in urban areas and even the definition of 'urban' could be discussed. What is certain is that urban impact was limited. We can therefore not correlate increasing income inequality to a growing percentage of the population moving to the cities and earning higher wages compared to the rural areas. In a previous paper on real wages (Bolt and Hillbom 2013b) we have also shown that differences between rural and urban wages have been negligible during the colonial era. That being said, there is a strong correlation between rapidly increasing urbanization during the era of the diamond economy, 1975 to the present, when the share of urban population increases from roughly 10 per cent to over 60 per cent (see figure 5). Meanwhile income inequality is declining during the same time period.

Figure 5: Increase in urban population as percentage share of total population, 1960-2012
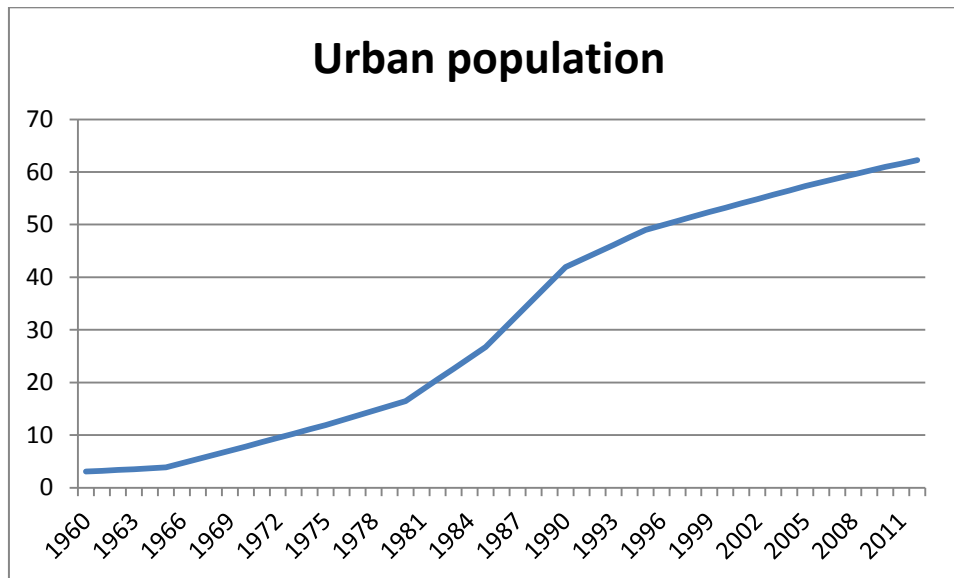
Source: World Bank Indicators 2013.

Since the early 1990s a serious unemployment problem has been registered with 18 per cent unemployment in 2005/2006 (Republic of Botswana 2006:2) and as long as the industrial sector is not expanding the figure will probably not improve significantly. With high urban unemployment rates individuals' motives for migrating to the urban areas can be questioned, but also explained in a satisfactory fashion. Urbanization becomes rational behaviour at the individual level as economic models shift focus from full employment equilibrium to expected rather than factual contemporary and future urban wages (Todaro 1969) and relative deprivation (Stark 1991). Instead of being a sign of modernization, urbanization in Botswana can then to a certain extent be perceived as a symptom of a dual economy with a poor and neglected rural sector.

Lipton (1977) points out that the most important class conflict in developing countries today is that between the rural poor and the urban groups experiencing improvements in living standards and human capital. There is an urban bias favouring the larger cities and industry at the expense of the countryside and agriculture and it is driving a process creating dual economies. It is damaging because it is counter-productive to both an efficiency norm, implying an allocation

of resources to maximize long-run output, and an equity norm, distributing income as to maximize welfare.

4.3 Economic growth and increasing incomes

At independence in 1966 Botswana was a poor, undeveloped, and seldom heard of part of the world. Forty years later it was regarded as a growth miracle (Samatar 1999), a sign of hope for sub-Saharan Africa, and to be the equivalent of prosperity and success. The country has experienced a staggering GDP per capita increase of 13 per cent per annum in the years 1980-89 (Mpabanga 1997:369) and a long-run growth over the last four decades that even surpasses the performance of the Pacific Asian Tigers (Leith 2005:4 Table 1.1) (see figure 6). This overall economic growth has also translated into increasing per capita incomes.

Figure 6: Increase in GDP per capita, 1980-2012.
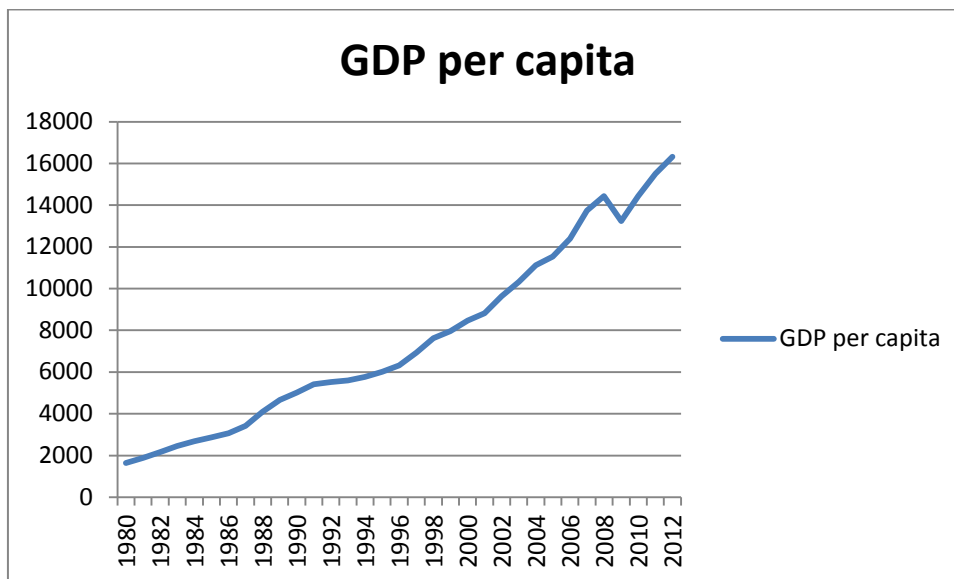
Source: World Bank Indicators 2013.

There has been both a trickle down from the wealthier segments of society and a political consciousness of the need to fight high poverty rates. As a result poverty in terms of income levels have been significantly improved from 59 per cent of individuals being poor in 1985 (Jefferis 1997:484 Table 2) to 30 per cent in 2005 (World Bank 2013). These are improvements that stand out in a regional context, but they have not been achieved through structural change. It

is important to keep in mind that attitudes towards inequalities and poverty are rooted in normative values and that distribution of resources and incomes are subject to conscious government policies. Government policy on distribution of wealth in Botswana has mainly been the equivalent of a basic needs system, giving support to the poor via food-for-work programs that have been running during droughts since 1965 (Colcough and McCarthy 1980:133) as well as providing health care and education free of charge until recently.

For the agricultural sector distribution of wealth has been associated with distribution of cattle, which has a long history of being very unequal with the traditional chiefs and their relatives being the largest cattle holders (Colcough and McCarthy 1980:22; Lawry 1983:6). Cattle continue to be amassed in the hands of a minority of large holders while the share of the rural population being cattle less is increasing. In the 1940s only 10 per cent of households had no cattle while in 1993/94 that figure was 57 per cent. In 1990, 33 per cent of cattle holders had on average six beasts each while 35 commercial farms, representing 0.6 per cent of cattle holders, held above 4,000 head on average and 19 farms even held more than 10,000 (Good 1993:223-224; Silitshena and McLeod 1998:127). After independence the traditional economic elite moved into the new state establishing a strong connection between large cattle holders and government. In the early years of Independence 2/3 of the members of the National Assembly were large or medium sized cattle owners (Samatar 1999:69-70).

During the colonial era the British spent little in excess of administrational costs in the Bechuanaland Protectorate. The independence government has, however, spent around 40 per cent of GDP primarily on infrastructure and human capital, a figure that is one of the highest in Africa and comparable with Norway (Acemoglu et al. 2003:85; Leith 2005:85 Figure 3.9). Government policy has given better results than what can be detected simply from levels of income poverty as it has improved human capital and the capabilities of the poor. In a broader based approach the concept of capability poverty can be used in which case Botswana scores much higher with 30 per cent suffering from capability poverty in 1996 according to UNDP as opposed to 46 per cent being income poor in the same year (Jefferis 1997:492-493). The actions of the Botswana government in improving capabilities have then been commendable, but they have not automatically generated dynamic processes of increasing productivity and are not equivalent to equity. Indeed, the reliance on government well-fare programs have turned many rural destitutes passive and cemented existing structures (see e.g. Nthomang 2004; Wikan 2004).

5. Concluding remarks

In the paper we have shown that the last 80 years have seen a long-term rise and decline in income inequality in Botswana. The beef export sector, established and developed during the colonial era and lasting roughly a decade into post-independence, made it possible for large scale cattle holders to turn their cattle wealth into incomes. They, together with government officials in the public sector, saw their incomes surging ahead of medium and small cattle holders and the cattle less as well as those employed in the private sector. Income inequality appears to have peaked at the time of the shift between the cattle and the diamond economies and since then we have seen a declining Gini. In the midst of these good news we should, however, keep in mind that Botswana's levels of income inequality are still among the highest in the world.

The long-term changes in the Gini beg the question how this fits with a story about the spread of Modern Economic Growth. According to a traditional Kuznets model inequality should be raising with the start of the industrialization, only to decline once industry is actually dominating the economy. Others, such as van Zanden, have, however, instead argued that increasing inequality occurs already during the pre-modern economy, well before industrialization.

Considering that the content of industrial growth in Botswana can be questioned and that an economic structural transformation has not taken place, we must conclude that MEG as envisioned by the generation of original development economists such as Kuznets and Lewis has not taken place. Instead Botswana is a country still characterized by pre-modern growth. Instead of making us refute the Kuznets' theory on long-term changes in income inequality it could be enough to adjust it to the current context. It could be that in contemporary sub-Sahara African countries it is the growth of the service sector and urbanization that are at the core of the contemporary modernization process rather than industrialization and that their effects on income inequality are similar.

References

Acemoglu, D., S. Johnson and J. Robinson 2003. 'An African Success Story: Botswana', in D. Rodrik, ed. In Search of Prosperity: Analytic narratives on economic growth. Princeton and Oxford: Princeton University Press, 80-119.

Adelman, I. & Morris C. T. 1997. 'Editorial: Development History and its Implications for Development Theory', World Development 25, 6: 831-840.

Berry S. 1993. No Condition is Permanent: The Social Dynamics of Agrarian Change in Sub-Saharan Africa. The University of Wisconsin Press: Madison, WI.

Bolth, Jutta and Ellen Hillbom (2013a) 'Social Structures and Income Distribution in Colonial sub-Saharan Africa: The case of Bechuanaland Protectorate 1936-1964', AEHN working paper series.

Bolt, Jutta and Ellen Hillbom (2013b) 'Real Wages and Standards of Living in Colonial Bechuanaland protectorate, 1900-1960', conference paper presented at the Swedish Economic History Meeting, 4-5 October, Lund, Sweden.

Bourguignon, F. and C. Morrisson 1990. 'Income Distribution, Development and Foreign Trade: A cross-sectional analysis', European Economic Review 34, 6: 1113-1132.

Colcough, C. and S. McCarthy 1980. The Political Economy of Botswana: A study of growth and distribution. Oxford: Oxford University Press.

Cooper F. 2002. Africa Since 1940: The Past and the Present. Cambridge University Press: Cambridge.

Emongor VE. 2006. Use of secondary effluent in food production in Botswana. Journal of Applied Science 6 (2), 318–324.

Ensminger, J. 1997. 'Changing Property Rights: Reconsiling formal and informal rights to land in Africa', in J. Drobak & J. Nye, Eds. The Frontiers of the New Institutional Economics. San Diego: Academic Press.

Gaolathe, B. 1997. 'Development of Botswana's Mineral sector', in J. S. Salkin, D. Mpabanga, D. Cowan, J. Selwe & M. Wright, Eds. Aspects of the Botswana Economy. Gaborone: Lentswe La Lesedi, 401-431.

Gerschenkron, A. 1962. 'Economic Backwardness in Historical Perspective', in Economic Backwardness in Historical Perspective. Cambridge, MA: The Belknap Press, 5-30.

Good, K. 1993. 'At the Ends of the Ladder: Radical inequalities in Botswana', The Journal of Modern African Studies 31, 2: 203-230.

Good, Kenneth (2008)

Gulbrandsen, O 1996. Poverty in the Midst of Plenty. Bergen Studies in Social Anthropology, 45. Bergen: Norse Publications.

Harvey, C. and S. R. Lewis Jr 1990. Policy Choice and Development Performance in Botswana. London: Macmillan in association with the OECD Development Centre.

Hillbom E. 2008. Diamonds or development? A structural assessment of Botswana's forty years of success. The Journal of Modern African Studies 46 (2): 191–214.

Hillbom E. 2010. Agricultural development and the distribution of water resources in Kgatleng District, Botswana. Development Southern Africa 27 (3): 412–427.

Hillbom, Ellen (2013) Cattle, Diamonds and Institutions: Main drivers of Botswana's economic development, 1850-present. Journal of International Development (forthcoming).

Iliffe, John (1987)

Jefferis, K. (1997). Poverty in Botswana. In J. S. Salkin, D. Mpabanga, D. Cowan, J. Selwe & M. Wright (Eds.) Aspects of the Botswana Economy. Gaborone: Lentswe La Lesedi, 469-499.

Kuznets, S. 1955. 'Economic Growth and Income Inequality', The American Economic Review 65, 1: 1-28

Kuznets, S. 1973. 'Modern Economic Growth: Findings and Reflections', The American Economic Review 63, 3: 247-258.

Lawry S. 1983. Land tenure, land policy, and small livestock in Botswana', Research Paper No. 78, Land Tenure Center. University of Wisconsin: Madison, WI.

Leith, C. 2005. Why Botswana Prospered. Montreal & Kingston: McGill-Queen's University Press.

Lewis, A. 1954. 'Economic Development with Unlimited Supply of Labour', The Manchester School 2, 2: 139-191.

Lewis, A. 1979. 'Dual Economy Revisited', The Manchester School, 47, 3: 221-229.

Lipton, M. 1977. Why Poor People Stay Poor: A study of urban bias in world development. London: Maurice temple Smith Ltd.

Mellor, J. 1986. 'Agriculture on the Road to Industrialisation', in J. P. Lewis & V. Kallab, Eds. Development Strategies Reconsidered. New Brunswick, NJ: Transaction Books, for The Overseas Development Council, Washington DC.

Mgadla PT. 1998. The Kgosi in Traditional Tswana Setting. In Botswana: Politics and Society, Edge WA, Lekorwe MH. (eds.). J. L. van Schaik Publishers: Pretoria.

Morapedi, Wazha G. (1999) Migrant Labour and the Peasantry in the Bechuanaland Protectorate, 1930-1965. Journal of Southern African Studies 25 (2): 197-214.

Mpabanga, D. 1997. 'Constraints to Industrial Development', in J. S. Salkin, D. Mpabanga, D. Cowan, J. Selwe & M. Wright, Eds. Aspects of the Botswana Economy. Gaborone: Lentswe La Lesedi, 369-387.

Nthomang, K. 2004. 'Relentless Colonialism: The case of the Remote Area Development Programme (RADP) and the Basarwa in Botswana', Journal of Modern African Studies 42, 3: 425-435.

Parsons, N. and M. Crowder Eds. 1988. Monarch of all I Survey: Bechuanaland Diaries 1929-37. Gaborone: The Botswana Society.

Parsons N. 1993. A New History of Southern Africa (second edition). Macmillan Education: London.

Perrings, C. 1992. 'Sustainable Development of the Human and Natural Resources of Sub-Saharan Africa: The case of Botswana', Report prepared for the Technology and Employment Branch, International Labour Office, Riverside.

Ramsey J, Morton B, Mgadla T. 1996. Building a Nation: A History of Botswana from 1800 to 1910. Longman Botswana: Gabarone.

Republic of Botswana (2007). Trade Statistics. Table 3A: Export by Principal Commodities. Gaborone: Central Statistics Office.

<http://www.cso.gov.bw/> access 2007-09-28

Roe E. 1980. Development of Livestock, Agriculture and Water Supplies in Eastern Botswana Before Independence: A short History and Policy Analysis. Ministry of Agriculture: Gaborone, Botswana.

Samatar, A. I. 1999. An African Miracle: State and Class Leadership and Colonial Legacy in Botswana Development. Portsmouth, NH: Heinemann.

Schapera I. 1994. A Handbook of Tswana Law and Custom (reissued). International African
    Institute: London/LIT Verlag: Münster-Hamburg.

Silitshena, R. M. K. and G. McLeod 1998. Botswana: A physical, social and economic geography
    (second edition). Gaborone: Longman Botswana Ltd.

Stark, O. 1991. The Migration of Labor. Cambridge, MA: Basil Blackwell Inc.

Todaro, M. 1969. 'A Model of Labor Migration and Urban Unemployment in Less Developed
    Countries', The American Economic Review 59, 1: 138-148.

Van Zanden, Jan L. (1995): "Tracing the beginning of the Kuznets curve: Western

Europe during the early modern period," Economic History Review, 2nd ser. 48, 643–664.

Wikan, G. 2004. 'The level of Living in Rural Botswana Re-studied' Norwegian Journal of
    Geography 58: 1-10.

World Bank 2006. World Development Report 2006: Equity and Development. Washington, DC:
    The World Bank.

World Bank (2013) World Bank Indicators

Wylie, D. 1990. A Little God: The twilight of patriarchy in a Southern African chiefdom.
    Hanover and London: Wesleayn University Press.