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economic history essays

Cover: A short history of coffee trade

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Dear Readers,

I am very proud to present you the second edition of the LSE Economic History Review by LSESU Economic History Society. Our journal showcases the outstanding works by our fellow LSE students on social and economic history. We received an overwhelming amount of submissions for our journal from students across all departments and all years of study. The submissions we received have been of the highest standards which made the reviewing process a pleasure. We would like to thank everyone for their enthusiastic interest and making this another success for the fourth year running. We hope that your support of the journal would continue by sending in your submissions for the upcoming journal.

Regards,

Leonard Lim

President

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How did international trade influence African political institutions?

VICTORIA ADAMS

The emergence of large-scale international trade between Africa and other parts of the world had a tremendous impact on continents' political institutions, the sheer impact on population displacement, changes in demography and structures to adjust to the trade. A significant proportion of the explosion in commerce that occurred between the 15th and 19th centuries was driven by or was at the very least linked to European expansionism, and by no-doubt part had such a dramatic impact as the transatlantic trade in slaves. The colossal scale of the ocean-bound trade by the 18th and 19th centuries had a transformative impact on practically every facet of African public life.

To investigate the impact of international trade on African political institutions, this essay divides the academic analysis into that of the immediate and short-term effects — how the trade and particularly the slaving industry impacted African institutions up to the 19th century — and the long-term effects, which, some scholars contend, persist to the current day. The purpose of this division is crucial, so as to differentiate between any immediate and potentially transient effects on Africa's governance and those that persisted not only through a period of colonial rule, but long afterwards. If the unbalanced trading relationship experienced by Africa caused permanent or extremely long-lasting changes to political institutions, it could be reasonably blamed for stalled or sluggish development extending to the present day.

Furthermore, for the purpose of this essay, the focus will be on the international trade in slaves, rather than other 'commodities' such as minerals – this measure has been

taken because they both had vastly different impacts on Africa's political institutions and both deserve to be studied in their own right. The trade was a vast and extractive industry that lasted for four centuries, shipping tens of millions kidnapped Africans, with a modern value that runs up to trillions of dollars, and at an unquantifiable human cost. The tremendous profits to be made transformed the wealth structure of African societies, and the unique brutality of the trade makes its likely impact on political institutions considerably larger than any other form of trade.

Firstly, we must seek to establish the immediate and short-term effects of European trade, and especially the effect of the trade in slaves. There is a general consensus on the economics of the market – that it was extractive, inhibited natural economic development, which might have occurred from mutually beneficial trade, and crippled the demographic structure of the most heavily affected regions. Lovejoy's 1989 literature review on the impact of the transportation of slaves leant heavily towards this analysis, at least as far as the economic impacts go (Lovejoy, 1989, p.393).

M'Baye describes the political implications as not only comprising slave trade, but trade in general. Using the example of peanut cultivation in Senegambia, he notes that the development of a feudal class system was encouraged by French authorities, and it became necessary for the production (M'Baye, 2006, p.615). Describing the changing political class during the time of the trade, he notes the emergence of an elite of mixed ethnicity (part African, part European), and the increasing political influence of "aristocracy and middlemen who facilitated the capture and sale of Africans" (M'Baye, 2006, p.607-616). He uses the example of Maba Diakhou Ba, a ruler of Saloum in modern-day Senegal, whose governing

hierarchy was largely made up of slave-raiders given strength by “feudal and anarchic class relationships” (M’Baye, 2006, p.615).

One way in which we can analyse the transformation of social and political institutions in Africa through the trade is by looking at the political and institutional effect that commerce had on European societies. Though in net value Europe was the beneficiary of the trade in general, and the slave trade in particular was debilitating for Africa, the tremendous scale of the extraction and the considerable profits to be made changed power structures on both sides. Acemoglu, Johnson and Robinson note that Atlantic trade in general strengthened “commercial interests outside the royal circle” (Acemoglu, Johnson and Robinson et al. will do, 2005, p. 562). Their thesis contends that the increased political power of this group of merchants and other commercial interests allowed for them to strengthen their property rights, indirectly helping to generate economic growth (Acemoglu, Johnson and Robinson et al., 2005, p.572). This phenomenon finds its mirror image in M’Baye’s interpretation of the “corrupt political and military aristocracies... that were inimical to capitalist development” (M’Baye, 2006, p.616). Since the local authorities benefitting from the extraction were violent rentiers, they had no similar interest in the promotion of private property, or of functional state apparatuses.

This thesis is reinforced by Nonso Obikili’s findings on the impact of the slave trade on precolonial politics in Africa, which finds a significant positive correlation between political fragmentation of ethnic groups and slave export intensity prior to colonisation using George Murdock’s data on political structures (Obikili, 2014, p.5). This in itself does not demonstrate a causal relationship. Obikili notes that it could in fact be the reverse — that fragmented political units made easy targets for slave

raiders — and the correlation would appear to be the same. For this reason he uses data from Nunn (2008) to control for the distance to the coast, in an attempt to isolate whether the slave trade (which disproportionately impacted areas closest to the Atlantic) was causing the fragmentation, or the other way round (Obikili, 2014, p. 9). The conclusion that the slave trade empowered groups that were “not necessarily interested in the development of the villages and towns as a whole, but more interested in the capture of economic rents for their individual units” provides a compelling mirror image to the one described by Acemoglu, Johnson and Robinson. The immensely disruptive commercial opportunity on both sides of the trade caused considerable political change. That change may have been beneficial for European states (though it is outside the scope of this essay to determine that), but it certainly was not for African institutions.

The most difficult case to make is that the relatively well-founded short-term impacts on African political institutions had a much longer-term influence on African political institutions, and one that lasts to the present day. By looking at some of the most prominent academic cases that argue that trade and the slave trade in particular had a long-term effect on African political development, it is possible to build an idea of the overall strength of the arguments, and their common pitfalls. Whatley offers a succinct précis of the argument that the slave trade had major long-term impacts when he says that “predatory political customs passed through colonialism into the post-colonial era and continue to influence the structure and performance of African political economies today” (Whatley, 2014, p.18).

Some authors lean on the relatively recent confluence of theories about economic growth and social trust. Nunn and Wantchekon make a statistical case that that

“individuals’ trust in their relatives, neighbours, coethnics, and local government is lower if their ancestors were heavily affected by the slave trade,” suggesting that fear of the extractive state under the conditions of the early and mid-19th century led not just to fear of outsiders, but of internal betrayal by their own kin, and that this attitude has lived on to be passed down. (Nunn and Wantchekon, 2011, p.3225- 3249). Equiano’s Interesting Narrative supports this, giving a first- hand account of being kidnapped and sold into slavery by a fellow African (Equiano, 1745). However, the validity of this source must be questioned, owing to the commercial nature of the book, as it could be perceived that events were dramatised for readers’ enjoyment. The academics do not make the comparison themselves, but the case could be compared to that of post-Soviet republics. Social trust in the former USSR is typically quite low, and some studies have found that this does demonstrate a casual relationship (Sapsford, Abbott, 2005, p.9). Part of this could be down to the Soviet Union’s culture of informing and reporting on the behaviour of people with whom citizens were in close contact.

As far as the effect on political institutions goes, Nunn contends that the weakness of African states is partly down to an absence of centralised institutions, which advance economic development. In the precolonial period, European states actively retarded political centralisation to facilitate expropriation, which left postcolonial states without the institutions and infrastructure they required to provide the normal functions of government (Nunn, 2008, p.165-166). Since the quality of political institutions is widely believed to be an important or even necessary component of economic development, the extent to which this lack of centralisation persisted specifically because of slavery is important.

Other scholars contest the thesis on a lack of centralised institutions without dismissing the idea entirely. Herbst for example agrees with Nunn that modern African states were left with highly inadequate governing infrastructures, but argues that much of that is not due either to colonisation, the slave trade or any relationship with Europe whatsoever. A combination of an extremely harsh climate and geography, considerable ecological variety even within small areas and the low population density made state-building a major challenge (Herbst, 2014, p.11-13). The factors are to some extent self-reinforcing. A difficult geography requires significant labour to construct infrastructure that would otherwise be simpler to realise, and sparse high-quality arable land caused the population to become more disparate. When referring specifically to the slave trade, Herbst contends that the thesis reinforces his arguments about African geography, since attempts by existing African states to make “forays into the interior to feed the continual demand for slaves” were not profitable, despite the enormous amounts of money to be made in the trade generally (Herbst, 2014, p.46).

Nunn addresses Herbst’s arguments directly, and attempts to factor geography and climate into his econometric analysis. However, he is also clear about the limitations of his own method here, noting that “with only 52 observations it is not possible to pin down the precise channels and mechanism underlying the relationships with any reasonable degree of certainty” (Nunn, 2008, p.164). Nunn finds a negative correlation between slave export intensity and 19th-century centralisation, suggesting some sort of correlation at least, even accounting for factors like geography and climate (Nunn, 2005, p.165-166). But with an R^2 result of 0.13, it is, on its own, hardly sufficient to overturn Herbst’s case. Even some scholars who argue that the slave trade degraded African institutions, and that the effects continue

to be felt today, concede that earlier states lacked the centralised institutions required even to defend themselves comprehensively. M'Baye references the Songhay empire, which was unable to withstand a Moroccan assault from north of the Sahara precisely because it was “so decentralised that it was unable to consolidate political power to resist the invasion,” which occurred in 1591. In the late 16th century, the transatlantic slave trade was just a tiny fraction of the size it would later grow to. According to Emory University's Trans-Atlantic Slave Database, just over 40,000 slaves were transported from Africa in the decades between 1511 and 1590 (Slavevoyages, 2013). That sum was surmounted in the decade between 1591 and 1601 alone, and the number of slaves transported in that 79-year period represents just 5-10% of a typical decade between 1700 and 1850 (ibid).

The case that the slave trade took a severe toll on the governing capacity and political institutions at the time at which it took place is strong. The evidence points towards a newly empowered elite helping to facilitate large-scale economic extraction for its own benefit and for the benefit of European states. Because of the immediacy of the events, it is much easier to measure the effects on African institutions. The further away in history we move from the end of the large-scale transatlantic slave trade, the more the arguments involved become nebulous and hard to quantify, compounded by a paucity of high-quality data.

These difficulties do not refute the argument that African institutions are still undermined today by the lagged effect of an extractive trading relationship, and particularly by the slave trade. Some of the correlations described between modern-day political and economic outcomes merit further study on the plausible basis that there may be a causal link. But a combination of the insufficient data and the

similarly persuasive arguments that geographical and ecological factors have held back the development of governing structures in Africa make discerning a long-term effect on the continent's political institutions replete with problems.

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Did Public Borrowing ‘Crowd-out’ Private Credit: Evidence from Coutts’ bank, 1761 – 1820

LEONARD LIM

This paper examines if private credit was crowded out by increased public borrowing as a result of the Glorious Revolution. The volume of money borrowed from Coutts’ bank and the British government debt has been compared to test the hypothesis of crowding out. Results show an increase in public borrowing did not have a negative effect on money lent but in fact increased the money lent out, contrary to previous scholars work that supported and argued for the hypothesis of crowding out. The main findings show that the effect of government borrowing during wartime on money lent increases by 7.14% for every 10% increase in government debt.

I. Literature Review and Motivation

The relationship of the Crown and Parliament fundamentally changed the structure of Britain’s finances when Protestant Dutchman William of Orange claimed the crown over from James II (Isreal, 1991; Morill, 1991). This revolution was famously known as the Glorious Revolution, whose effects on the financial system had been debated over many years, especially on the disadvantages in the private credit market. The common ground that these scholars stand on is that the government truly benefited from the financial revolution. Evidence from increasing government debt and especially war debt, at lower interest rates shows that the government gained greater and easy access to credit. Most notably, in nine years of war, debt grew from £1 million to approximately £17 million – nearly 40% of GNP (North & Weingast, 1989). North and Weingast have added that the lower risk premia and improved property rights also benefited the private borrowers, who could

enjoy borrowing at lower rates (North & Weingast, 1989). Acemoglu et. al. alongside other scholars have also agreed that until property rights were enforced, rapid development did not take place and hence the revolution was seen as a turning point (Acemoglu, Johnson, & Robinson, 2005).

However the beneficial effects on the private market credit have not been widely accepted. The ability in financing war allowed Britain to win the wars but at the expense of private consumption and investment. Williamson showed that especially during wartime, war financing crowded out private investment (Williamson, 1984). Williamson attributes the crowding out of private financing to the slow growth of Britain during the First Industrial Revolution. On a more micro-level scale, to support the crowding-out hypothesis, Temin and Voth and Quinn have done case studies on Hoare's Bank and Child's Bank respectively (Temin & Voth, 2005; Quinn, 2001). Their results also prove that private credit was crowded out during wartimes when government financing increased. It has also been shown that private credit and public borrowing were close substitutes thus causing the crowding out (Quinn, 2001). This paper aims to find further evidence –also on a micro-scale, on the other private bank in London, Coutts' – assuming that this hypothesis holds.

The motivation for a case study on Coutts' is because it can add a different dimension to the debate. Temin and Voth's paper assumes Hoare's to be representative of the economy-wide patterns. Their assumptions are highly questionable since the customers banking with the West End private bank were of the elite group like earls, dukes, viscounts and lords. This group was obviously the wealthier individuals in London, and possibly the whole of Britain too (Temin & Voth, 2008). Their paper also suggests that the location of the bank and the status of the individuals were more exposed to government-induced scrambles for liquidity. In

other words, these customers were more likely to be affected by changes in government spending patterns. Thus, this paper will try to challenge the claim by Temin and Voth that Hoare's bank is representative of the whole of Britain.

By using a different bank in a different location, this is where this paper will be able to shed more light in the gap of knowledge. To ensure this, further investigation of the types of customers Coutts dealt has been done. They had depositors from different backgrounds, actors and actresses – mainly from their location which was surrounded by theatres – titled families, gentries and some merchants – although only a small amount, again due to the location (Healey, 1992). Thomas Coutts, the partner that successfully resurrected the bank in their darkest times, was not politically driven and was more pragmatic. He was willing to take deposits from almost anyone without taking into account which political party they supported as long as they met the bank's requirements (Healey, 1992). Thomas also had a number of countrymen from Scotland banking with the London bank. The diversity of customers banking with Coutts' from working class to the elites provides a more representative sample than Temin and Voth as well as Quinn, can provide. Thus, the gap in the literature to which this paper can add on, makes this research an ideal and beneficial case study to add to the on-going debate.

Following this literature review and motivation, the rest of the paper is separated into five parts. Part II discusses the methods carried out in this paper. Part III provides a discussion on the source and data evaluation. Part IV analyses the data considering time-series graphs and using econometrics' simple OLS regression. Part V, is a discussion of the findings and Part VI presents the conclusion.

II. Method

The main hypothesis being tested is whether increased public borrowing leads to crowding out of private credit. Before going further, it is important to understand the context of 'crowding-out' in this paper. Crowding-out is the rationing of the outflow of private loans to increase loans to the government. To test the crowding-out hypothesis, the appropriate variables are the volume of money lent out by the bank – dependent variable – and the volume of government debt – the independent variable. This paper compares the two variables against a control variable which is peacetime or wartime. The wartime chosen was based on the wars that involved Britain and in which their financing was very high. In this period, three wars were picked out, the ending years of the Seven Years War¹, 1761 – 1763, War of American Succession, 1775 – 1783, and the Napoleonic War, 1803 – 1815.

With these variables, we will first look at possible links that stand out in a particular period. Then we will use simple econometrics to test the hypothesis by using a simple OLS regression of volume of money lent on government debt. The regressions involve an interaction term to capture the different effects of government debt during wartime and peacetime. Using the interaction term will allow for comparisons between wartime and peacetime. To look at short-term effects, the residuals of the variables are run again using the same regression as the first. Running both the regular regression and the residuals of the variables regression allow for comparisons of short-run and long-run effects.

Both regressions use the natural logarithm of each variable, except for the dummy variable war, to make comparisons of the data in relative terms instead of absolute values. This transformation ensures that the interpretation of the slope can be made in terms of trend changes thus comparisons can be easily made and the

¹ Due to the availability of data from Coutts' records, only the last three years of the Seven Years War was taken. Comprehensive data recording by the bank only began from 1761.

size of the changes can be easily measured. Another benefit of using natural logarithms would be to dampen any extreme observations possibly due to measurement errors.

III. Source Discussion and Data Evaluation

To achieve the purpose of this paper, the volume of money lent was obtained from the balance books of Coutts Bank from 1761 - 1820². It should be noted that accounting techniques and financial practices during this period were often changing and not as neat as they would have been today since these years were the seminal years of private banking. This issue limited the range of data that could be used in this paper. For example, for a thorough comparison with Temin and Voth's results, it would have been desirable to have interest rates as another variable, just as they had, too. The records from Coutts do not have detailed information on their loans such as the interest rates and their maturity date; a limitation faced in the data. However, the most important variable that is being tested – volume of money lent – has been consistent over the whole period.

For data on the volume of government debt, data has been taken from the Global Financial Data (GFD)³. To check for the reliability of the data, information taken from the database is cross-referenced with Sussman and Yafeh's data on government debt as show in Figure 1, with solid lines representing Sussman and Yafeh's data and the dashed lines representing data from GFD (Sussman & Yafeh, 2006). Comparisons from the available data (Sussman and Yafeh's paper only cover

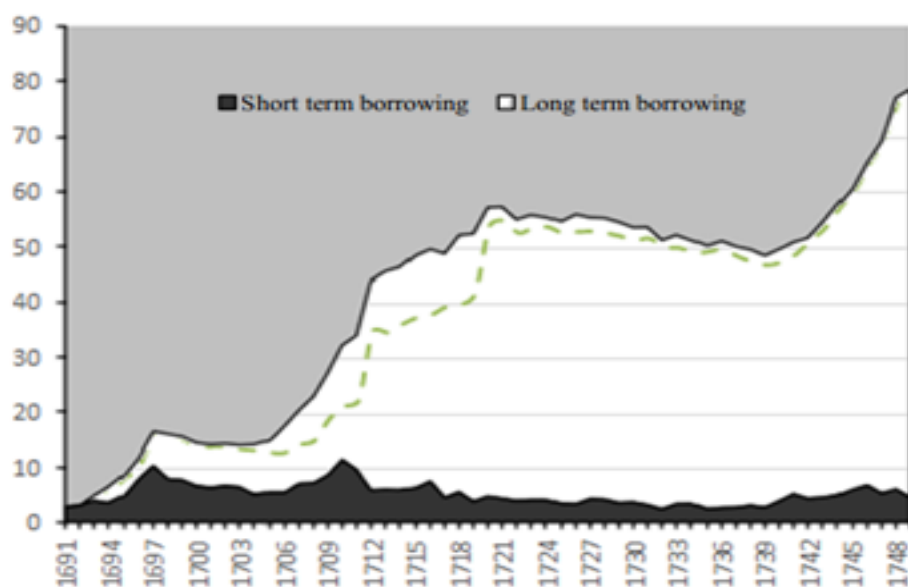
² The data was compiled by myself at the Coutts' Archives from the balance books dating from 1761 to 1820. Full table of data is in Appendix, Table 1.

³ Full table of government debt in Appendix, Table 1

from the years 1691 to 1748), both graphs have the same pattern and shape. Thus, the figures obtained from GFD can be taken as true and reliable data.

In order to account for inflation, the Retail Price Index (RPI)⁴ has also been collected from GFD. This set of data has also been checked for reliability. The data is then cross-checked with Phelps Brown and Hopkins figures which are often cited when examining price indices (Phelps Brown & Hopkins, 1959; 1956). The figures obtained from GFD are proven to be reliable and do not affect the reliability of the study.

Government Debt from GFD vs Sussman and Yafeh from 1691 - 1748



IV. Analysis of Data

For the analysis of the data, the first OLS regression run is:

Equation (1):

$$\ln_Real_Money_Lent = \alpha_1 + \beta_1 (\ln_Real_Govt_Debt) + \gamma_1 (War) + \delta_1 (\ln_Real_Govt_Debt \times War) + \varepsilon_1$$

⁴ Full figure in Appendix, Table 1

where, 'ln_Real_Money_Lent' is the natural logarithm of the money lent out by Courts' in the private credit market adjusted for inflation. 'ln_Real_Govt_Debt' is the natural logarithm of government debt adjusted for inflation. 'War' is a dummy variable for values of 1 being wartime, and 0 being peacetime. 'ln_Real_Govt_Debt x War' is the interaction term for government debt during wartime.

```
. reg ln_real_moneylent ln_Real_Govt_Debt war Debt_war, robust
```

Linear regression

Number of obs = 60
F(3, 56) = 6.03
Prob > F = 0.0012
R-squared = 0.2033
Root MSE = .46319

ln_real_moneylent	Coef.	Robust Std. Err.	t	P> t	[95% Conf. Interval]	
ln_Real_Govt_Debt	.1509416	.1825262	0.83	0.412	-.2147023	.5165855
war	-10.0484	5.057127	-1.99	0.052	-20.17904	.0822423
Debt_war	.5629467	.2757715	2.04	0.046	.0105101	1.115383
_cons	6.875871	3.350103	2.05	0.045	.1648096	13.58693

Table 1: Regression of equation (1)

The coefficients α_1 , β_1 , γ_1 , δ_1 represent the coefficients of their respective variables while ε is the residual.

The results from Table 1 show that an increase in 10% of real government debt is associated with a 1.51% increase of real money lent during peacetime and it is insignificant. To determine if government debt is the same during wartime and peacetime we look at the coefficient of the interaction term, δ_1 , which is 0.563. This is significant at the 5% level which implies that government debt during wartime and peacetime are different.

The main result is to understand is if government debt effect during wartime is significantly different from zero. From Table 1, the sum of the coefficients for both

'ln_Real_Gov_Debt', β_1 and interaction term 'Debt_War', δ_1 . Results show the effect of government debt during wartime increases real money lent out by 7.14%, that is, for every increase in 10% of government debt. The sum of coefficients are then tested using the t-test. The test result shows that this figure is significant even at the 1% level (p-value, 0.000) and reject the null hypothesis.

Contrary to Williamson's and Temin and Voth's claims that wartime financing crowded-out private credit, these results show that wartime financing did not induce Coutts' to ration their credit for loans to their customers. In fact, during wartime, money lent out increased. Following these results, further analysis would be needed to understand the cause of this. It is possible that this was a long-run and aggregate effect. Thus the next step is to compare short-run effects on the money lent to uncover possible missing information.

To test this in further detail, a regression of the variables – ln real money lent and ln real government debt– using a constant, a time trend and time trend square is run. This regression allows us to capture non-linearities within the data that could cause problems in our regression. The regression run is:

Equation (2) and (3)

$$Z_{j=2,3} = \alpha_j + \beta_j (\text{year}) + \gamma_j (\text{year})^2 + \varepsilon_j$$

Z represents both the variables regressed. The residuals of these regressions are run as in equation (4) and its coefficients are compared with the coefficients from equation (1). The regression in equation (4) shows the short-run effects. The lending residual (CouttsGAP) and government debt residuals (DebtGAP) are plotted in Figure 1. There are signs of negative relationships shown although not persistent. For example, in the midst the War of American Succession, in 1779 there was an

increase in government debt and a decrease in money lent. The second occurrence of a negative relationship was during peacetime between 1795 and 1801. Although these periods show an inverse relationship, only the period during wartime shows an increase in government debt leading to a decrease in money lent. To test the extent of these short-run effects, we run the regression:

Equation (4):

$$CouttsGAP = \alpha_4 + \beta_4 (DebtGAP) + \gamma_4 (War) + \delta_4 (DebtGAP \times War) + \varepsilon_4$$

Results of the regression of equation (4) are shown in Table 2. The interpretation of the coefficients is the same as before. The coefficient of β_4 , implies that a 10% increase in debt is associated with a decrease in money lent by 6.65% during peace time. The interaction term coefficient δ_4 , -0.0031 which is insignificant, tells us that the effect of wartime and peacetime does not affect government debt. The most crucial result to observe is the sum of coefficients β_4 and δ_4 , implies that the effect of government debt during wartime – a 10% increase in war financing – decreases money lent out by 6.67%. T-test results show that this is insignificant (p-value, 0.2798) and the null hypothesis of the effect of government debt in wartime is significantly different from zero, and hence cannot be rejected.

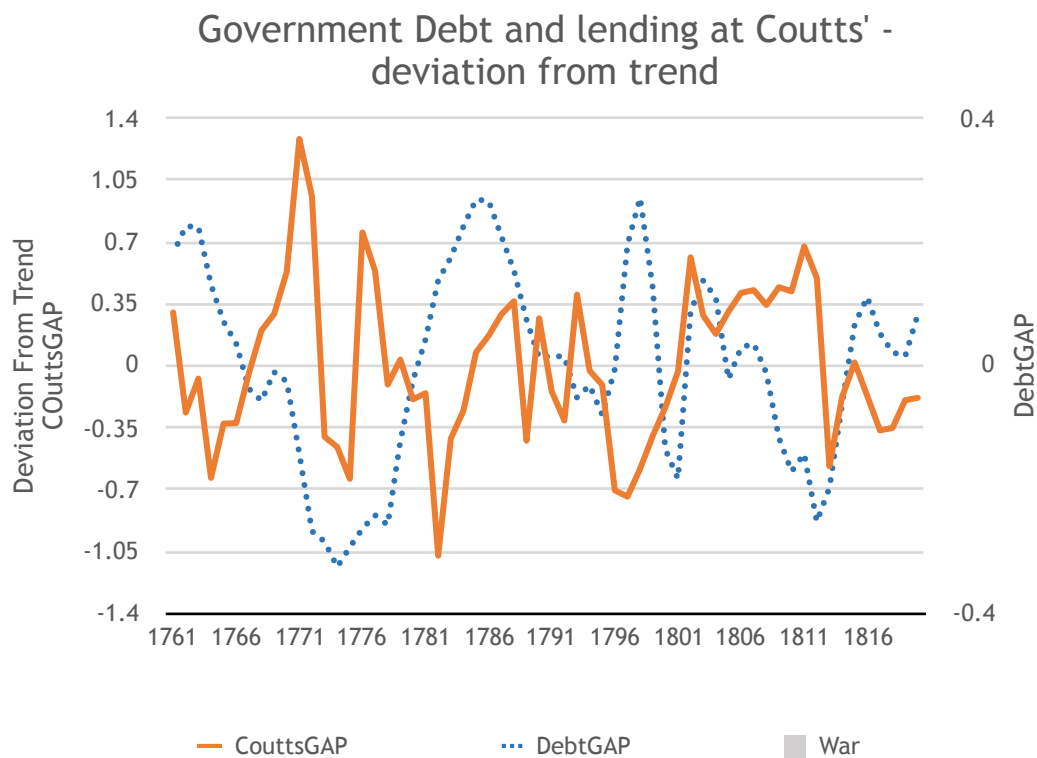


Figure 1: Government debt and lending at Coutts' - deviation from trend⁵

```
. reg CouttsGAP DebtGAP war DebtGAP_War, robust
```

Linear regression

Number of obs = 60
 F(3, 56) = 1.30
 Prob > F = 0.2850
 R-squared = 0.0748
 Root MSE = .447

CouttsGAP	Coef.	Robust Std. Err.	t	P> t	[95% Conf. Interval]	
DebtGAP	-.6645979	.6420248	-1.04	0.305	-1.950728	.6215323
war	.0982455	.1191802	0.82	0.413	-.1405012	.3369921
DebtGAP_War	-.0031	.886833	-0.00	0.997	-1.77964	1.77344
_cons	-.0409775	.0830016	-0.49	0.623	-.2072496	.1252947

Table 2: Regression of equation (4)

To see the differences between the long-run and short-run effects, coefficients of equation (1) and (4) are compared. In equation (4), it shows that there is a negative

⁵ Detailed data in Appendix, Table 1.

relationship while equation (1) shows a positive relationship. Although the former seems to support the crowding-out hypothesis, there is insufficient evidence to support it as all its coefficients are insignificant. The following part of the paper discusses plausible explanations for the results.

V. Discussion

The overall result of this paper shows that Temin and Voth's hypothesis about crowding-out is not supported, given the evidence from Coutts' bank. In fact, higher government debt during wartime financing is associated with higher volume of private credit loaned out. The results are along the lines of what has been postulated by North and Weingast; both private and public credit markets benefit from the financial revolution in Britain. This paper shows that Temin and Voth's assumption about their Hoare's sample being representative of the whole Britain is an assumption that is not valid. There could be possible explanations for this.

Firstly, there were different customers that Coutts', Hoare's, and Child's dealt with as has been mentioned before⁶. The second plausible explanation is the customers of Coutts' happened to benefit from an increase in government borrowing. During wartime, demand for resources such as food, weapons, labour, transportation and medical care would increase substantially. It could be that some of their customers were directly linked in these industries that provide the necessities demanded during wartime. These customers will benefit greatly from increased spending by the government and they themselves in turn would be more able to increase their own consumption thus leading to an increase in taking loans from the bank.

⁶ This is discussed in Part I, Literature Review and Motivation.

The third possibility is that Coutts' or their customers were not directly involved in investing in government war debt unlike other banks. Other banks that invested in war debt would have to ration their private loans to obtain more funds in what could possibly be a higher yield and lower risk investment. These debts generated have higher returns as the possibility of defaulting by the government is very low; a result of the Glorious Revolution. This is why the banks needed to ration their credit while individuals that also chose to invest in war debt would have to decrease their spending and thus had to take on fewer loans. This is the explanation offered by Temin and Voth, as well as Williamson. Thus, if both Coutts' and their customers were less vested and interested in war debt, their loans and spending patterns would not have gone in the direction of the crowding-out hypothesis. Along with the previous reason, it makes sense that government debt and money lent follow a positive relationship.

The final part of this paper sets out the limitations of the papers and improvements that can be made for further research on this topic. The first limitation would be the short time period of only 60 years. A larger period extending even further back just after the Glorious Revolution would provide richer information and the impact of the revolution can then be truly tested. However, due to the accounting and book keeping work that Coutts' practised when they started in 1692, the earliest dates that had proper data started only in 1761.

Another limitation is in the data from the archives itself. Their simplistic style of recording their books are not very informative. For example, in order to make better comparisons with Temin and Voth's or Quinn's works, similar data should be collected but their data on the interest rates on loans, maturity dates and types of bonds held were not detailed enough to understand what was happening. The other

limitation would be picking the 'war' periods. During this period, there were many other wars going on that might have involved Britain indirectly in terms of financing their allies, but which were not accounted for. The choice of wars were wars in which Britain fought, and were hence very taxing financially. Finally, like all case studies, their main limitation would be on its external validity – how representative is this bank for the rest of Britain's bank ecosystem – such as how this study has challenged the representativeness of Hoare's.

Following these limitations, it opens up more opportunity for further research to be done. Other than addressing the limitations, in order to extend this research, more controls should be included. For example, to truly assess how vested Coutts were in war debt, more in-depth detailed information on their customers – as was done by Temin and Voth, who looked at individual identities, terms at which they borrowed at, the collateral that was borrowed against (Temin & Voth, 2008). By having more controls, a stronger causal effect can be made.

VI. Conclusion

Contrary to Temin and Voth, Williamson, and Quinn, this paper shows that there was no crowding-out for wartime financing. Private credit market did not shrink as public loans increased. By looking at trends, there are few periods where negative relationships appear. The periods of a negative relationship were only during 1767 – 1773, 1780 – 1782, and 1795 – 1800. However, these periods do not show enough evidence to support the crowding out hypothesis. Results show that the effect of government borrowing during wartime on money lent increases by 7.14% for every 10% increase in government debt. This result is significant even at the 1% level. The results of this paper could be due to possible reasons such as different customers

and banks with different interests in war debt and different levels at which their customers are affected by government debt.

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How the relative power of states and markets have shifted over time: A short history of coffee trade

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Coffee is the second most traded commodity in the world. It accounts for annual exports totalling approximately US\$15 billion, according to the International Coffee Organization (ICO). It has radically shaped the politics, history, economy and demographics of countries that produced it and consumed it throughout history. Cities have flourished thanks to its trade, and it has helped develop infrastructures and technology. However, coffee has also been the reason behind the forced relocation of millions of slaves from Africa to the Americas, and has sustained cruel dictatorships in Central America as it was crucial for maintaining US hegemony and control over communist threats in Latin-America during the Cold War. The purpose of this essay is to outline a history of the coffee trade and to show the gradual process that prioritised the market over state institutions in decision making within the industry.

I will briefly mention the beginnings of the coffee trade by the Arabs and the eventual European take over. Moving onto the 19th Century we will look at the high point of Brazil's coffee trade and the way it came to claim a dominant position in setting international prices, before ceding its position with the emergence of new producing countries acting as free-riders on the back of Brazil's policies. I will continue by examining the consequences of the Great Depression and World War II (WWII), the Cold War and the creation of the ICO. I will explain the post-Cold War collapse of the ICO due to US withdrawal from the organisation, and the IMF and World Bank sponsored neoliberal policies of the 90s which led to the triumph of the free market. I will mention speciality coffee and the possible future

direction of the market. To conclude I will illustrate how coffee prices are set by the stock exchange in New York, with producers having no say in the matter.

Until mid-16th century the coffee trade was monopolised by the merchants of Mocha, in present day Yemen, from where coffee was exported to the Arab world. It entered Europe through Venetian traders in the 17th century and quickly spread around Central and Northern Europe. During an era of European expansion, the imperial powers discovered a perfect commodity: it was a "habit-forming product that travelled well and had an existing market back in Europe" (Luttinger & Licum 2006: 24). Coffee is a crop that grows in warm climates, and European countries sought to cultivate it in their colonies. The Dutch planted coffee in Ceylon and the process was emulated by the French, Portuguese and British with plantations in Africa, Asia, the Caribbean and South America. The plantations used slave labour, and it is estimated that 3 million Africans were shipped to work in the coffee and sugar industries between the 17th and 19th centuries (Morgan, 2007:32). The amount of cash involved in the coffee trade at the time was so high that King Frederick the Great asked his scientists to create a substitute in order to decrease imports of French coffee. They created chicory coffee, which was promoted by Napoleon during his Continental campaign to avoid importing coffee from the British. The production of coffee in the colonies had a direct impact on domestic jobs in Europe due to the activities directly linked to it, such as shipbuilding, iron manufacturing and the fire arms used to exchange for slaves. The cargo shipments played a big role in the banking and insurance business in London, the bank of England was one of the biggest investors, and even the Church profited from it, since they charged a fee for baptising slaves (Morgan, 2007:32) (Dunn) (Luttinger and Licum)

Brazil entered the 19th century as an independent country and came to control approximately 75% of the world's supply (Luttinger, 2006: 73). Brazil, through the *Instituto*

Brasileiro de Café, regulated the price by restricting the quantity of coffee released into the international market. State intervention in the market drastically altered the political and economic landscape for all involved. Many countries took up coffee planting as "free raiders" of Brazil's policy, as exemplified by the emergence of Colombia in the industry. The new producers were not bound by any restriction on supply but enjoyed the benefits of the international price set by Brazil. With the growth of Colombian trade, Brazil demanded that Colombia address the issue. In 1936, strongly influenced by the Great Depression, Colombia agreed to work with Brazil in an attempt to counteract the wildly fluctuating price. This project set a precedent to the ICO, which would be put in place in 1962.

During the Great Depression of the 1930s the consumption of coffee plummeted. In an effort to stop a massive surplus of coffee building up on the world market, Brazil burned 25% of its production. It is estimated that the Brazilian growers burned or dumped into the sea over 10 billion pounds of coffee between 1931 and 1944 (Luttinger, 2006: 57).

It is important to distinguish the two varieties of coffee available: the best quality Arabica has a distinctive flavour and aroma, while Robusta is higher in caffeine and of poorer quality but more resistant to disease and weather. Robusta is therefore cheaper to produce, and is mainly used for instant coffee, which was invented by Nestlé Brazil in 1930 and appeared in the market in 1938. The USA supplied rations of it to the soldiers during World War II. The war caused an overall decline in coffee consumption but a boom in instant coffee, which became a commercial success. This opened the door to cheap Robusta-producing countries, such as French colonies in Africa, which dragged prices down even further (Topik & Clarence-Smith, 2006 p.81).

The end of WWII marked a shift of power, and the consuming—rather than the producing—countries began to dictate terms within the industry. The USA understood the

importance of coffee to Latin American economies. With reference to the region, President J.F. Kennedy is quoted as saying "a one-cent drop in the coffee price can create a Marxist wave" (Luttinger, 2006: 86). By guaranteeing stable prices, the USA came to influence foreign policy in South America. Trade was used to co-opt states into its global sphere of influence on countries for which coffee was the primary export, (Krasner, 1973: 502). Coffee became indistinguishable from government in Central America, where the plantation owners were also members of the ruling parties. The American roasters ensured that the agreements between the USA and producing countries "aligned with their own agendas" (Luttinger, 2006: 34). 1962 saw the creation of the ICO, which initially consisted of a set of agreements between the consumers and the producing countries that regulated prices and output through accords. This mechanism sought to achieve adequate supplies for consumers and fair prices for producers. The agreements set a quota for each country, and state institutions were in charge of regulating the cultivated land and the exporting amounts and ensuring that any production surplus was kept off the market. Most of the surplus was sold to non ICO countries, such as the Communist bloc. In economic terms, the ICO was beneficial to the producers, although many Central American plantation owners, in the rush to meet the quotas, displaced local native communities, paid subsistence wages and killed any trace of trade unionism fighting for minimum living conditions.

In 1986 Brazil suffered a frost that badly affected its crop and led to an increase in other countries' quotas. When Brazil recovered it sought to regain its 30% share of the market, but by now Mexico and Indonesia wanted to hold onto their higher production share. This set off a series of tense negotiations, and many countries ceased to comply with ICO agreements. To make matters worse, the end of the Cold War meant the end of the communist threat, and the USA saw no reason to continue as a member of the ICO. The

fear of communism receded and the USA withdrew in 1993. With the biggest consumer out of the organisation (USA accounted for 25% of world consumption), the ICO collapsed and became what it is now, just a marketing and promotion institution. As countries were no longer bound by any ICO restrictions, they increased cultivation, more countries joined the coffee trade, fostering the problem of excess of supply. The government institutions responsible for ensuring compliance with ICO agreements lost their *raison d'être* and closed. During the 90s wave of neo liberalism, the IMF and the World bank played an intrusive role in the economics of developing countries, demanding reforms supporting Free Trade in exchange for loans. The World Bank provided Vietnam with credits which the state used for reforestation with Robusta coffee trees under their Đổi Mới (Renovation) economic regime. Between 1992 and 2003 Vietnam increased its cultivated area from 67,000 ha to 500,000 ha, eventually becoming the world's second-biggest producer after Brazil (Wild, 2005: 285). Although the World Bank states that it was the Vietnamese government that decided how to use the loans, some might argue that this was a sort of reparation for the damages caused by the Agent Orange during the Vietnam War. Along with other new producers, the emergence of Vietnam's cheap Robusta lowered the international price of coffee to a historical low.

Currently the "Big Four" roasters (P&G, Sara Lee, Kraft and Nestlé) own 40% of the market (Wild, 2005: 3). They produce all the value-added activities, which means taking most of the profit, and the producing countries only supply the basic green bean. When Europeans started trading coffee it was a product sustained by the blood of slaves for the profit of their European masters. Nowadays coffee profits are enjoyed by the big roasters, to the detriment of the producers. The roasters are creating a change in taste, slowly ensuring that costumers see little difference between the good Arabica and the cheap Robusta instant coffee. So where is the future for the market as a whole? I argue that

smaller producing countries will need to either specialise in gourmet coffee or abandon production. The big roasters do not import coffee from countries that cannot meet the quota, as deliveries are not reliable enough for their blends. If these countries cannot produce a characteristic flavour, they will have to abandon production altogether. Specialty varieties such as Blue Mountain from Jamaica or Harare from Ethiopia are not priced as commodities at the stock exchange, but through auctions. This means that their prices are considerably higher, but their product represents only a small percentage of the world trade. This type of coffee includes Free Trade and Organic.

The growers are now at the mercy of the market. The price is not set according to production costs, but by the New York stock exchange. Speculators buy large amounts of coffee at cheap prices and store it. When there is a shortage due to weather, war or other political issues, the coffee price increases following the basic law of supply and demand. The producers quickly plant more trees hoping that they will enjoy the benefits of the higher prices, but coffee trees take approximately 3 years to mature and produce fruit. The growers take loans to cover the planting which will not give them any immediate benefit. At this point, speculators release the cheap coffee they have been storing, and make a big profit. This added supply brings the price down again, so by the time the coffee plants are ready to produce, the price has returned to its previous low, and producers have to sell their newly harvested coffee at prices lower than the production cost in order to cover their loans or credit. Smaller producers lack the resources for storing coffee like the speculators in the New York stock exchange do, and they are forced to merge or abandon the business. In real terms, coffee price is at its lowest point in the last 30 years according to ICO statistics. It has reached such a low price that the wages paid to workers in the plantations remind us of modern day slavery.

To conclude, I have illustrated the importance of the coffee trade and its effects on economies throughout history. However, the focus of this analysis was on the 20th century, which began with Brazil as the biggest producer, responsible for setting the international price. New countries emerged as free-raiders on the back of Brazil's policy. Later, the First World War and the Great Depression decreased demand and, in an attempt to keep the price artificially high, Brazil burned a quarter of its production during the period. The Cold War prompted the creation of the ICO, which fixed the quotas of each member-state in terms of market supply. The end of the Cold War meant that the USA, the world's biggest consumer of coffee, withdrew from ICO and triggered the collapse of the organization. The IMF and World Bank's intrusive policies promoted market deregulation, producing devastating effects for coffee growers. The government agencies responsible for overseeing compliance with ICO agreements ceased to exist and the price is now set by speculators on the New York stock exchange. The future of the market is uncertain, and experts argue that countries will have to either specialise in commodity coffee or speciality coffee or abandon the industry. Developed nations own the big four roasters that control 40% of the market and also enjoy the profits of the industry's added value activities, while the producing countries are paid minimum prices for the raw product. The history of coffee has been fundamentally linked to colonialism and slavery in the past, and despite the collapse of the former and the outlawing of the latter, economic trends show worrying similarities to the past history of the industry.

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Can it be argued that colonial rule had a positive effect on human capital in Africa?

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“Until the lions have their own historians, the history of the hunt will always glorify the hunter.”
(Chinua Achebe)

“Perhaps, in the future, there will be some African history to teach. But at present there is none, or very little: there is only the history of the Europeans in Africa. The rest is largely darkness [...].”
(Hugh Trevor-Roper)

1. Introduction

T

he question whether colonial rule had a positive impact on African human capital has

been receiving increasing attention by researchers in African Economic History, in particular due to the presumed linkage between human capital accumulation and economic growth and development (Barro (1991), Mankiw, Romer and Weil (1992), Krueger and Lindahl (2001), Barro (2001), Cohen and Soto (2007), Gennaioli et al. (2013)). Using the accounts of pre-colonial Timbuktu written by the traveller Leo Africanus, as well as supporting secondary literature, I will argue that the current state of research does not allow for the conclusion of a positive colonial legacy of human capital. I will point out three problems with the approaches in the existing literature. Firstly, I will emphasise problems inherent to the nature of narrow case studies. Secondly, I will argue that ignorance of the various forms of pre-colonial human capital in Africa might cause problems in the measurement of human capital changes as proposed by the literature. Lastly, I will discuss the problem of a bias potentially arising from the endogeneity of missionary activity.

2. Primary Source: Leo Africanus' account of Timbuktu

According to his own autobiographical remarks, Al-Hasan b. Muhammad al-Wazzan al-Zayyati, or 'Leo Africanus', as he was called later, was born in Granada around 1493 (Fisher (1978), p.89). Not many details are known about his life, as he did not appear in many contemporary sources, so the few things that are known largely rely on statements by Leo Africanus himself (Masonen (2011), p.115). Presumably soon after his birth, his family fled to Fes to escape the Spanish conquest (ibidem). In the beginning of the 16th century, he is said to have travelled Northern Africa extensively, though his exact itinerary is unknown to date (Fisher (1978), p.90). The accounts of his travels are the earliest available written source from the region of central Sudan (Fisher (1978), p.86).

The limited evidence available to testify for his biography and the peculiar circumstances under which his travel accounts were created call for some caution in interpreting his work. In 1518, he was captured by Sicilian corsairs and subsequently handed over to Pope Leo X (Masonen (2011), p.123). He agreed to convert to Christianity and was baptised as 'Johannes Leo de Medicis', but is said to have reconverted to Islam at a later stage (Masonen (2011), p.123 and p.130). In the light of a planned crusade against the Ottomans, which was supposed to start in Northern Africa, Leo Africanus was asked to share his geographical knowledge of the region in a traveller survey (Masonen (2011), pp.125ff.). It is in this context that his book, "A Geographical Historie of Africa", was written, in 1526, and subsequently published in Italian language in 1550 (Masonen (2011), p.131 and p.135). His accounts became very popular among contemporaries and are even said to have influenced Shakespeare's character of Othello (Masonen (2011), pp.135f.).

Given the context of his writing, it is not unlikely that Leo Africanus' account of Northern Africa is subject to bias. It is imaginable, for example, that he was adding fictional elements to his narrative in order to make an impression on his patron, the Pope (Masonen (2011), p.141). On the other hand, it is possible that he tried to disguise

important facts and details, such as exact geographic locations, given the possibility of the use of his knowledge for an invasion of his former home. Bearing these points in mind, his narrative of the richness of Timbuktu's king, whom he describes to own "many plates and scepters of gold, some whereof weigh 1300 poundes"⁷, has to be evaluated with greater caution. On the one hand, these descriptions of the economic prosperity of the region go together with the narrative about the riches of the Mali ruler Mansa Musa. The writer Ibn Fadl Allah al-Omari recalled that even ten years after a visit of the Mali king Mansa Musa to the city of Cairo in 1324, their market had not yet recovered from the inflation incited by the influx of gold the king had brought with him (Meredith (2014), p.76). On the other hand, and in contrast to this, a French traveller in 1830 described the city of Timbuktu as "a mass of illlooking houses, made of earth" (Caillié (1830), p.141).

While the narrative on the fascinating richness of Timbuktu is not conclusive, Leo Africanus' accounts on Timbuktu's intellectual prosperity have largely been backed up by recent explorations of local (and mostly private) archives, which suggest a tradition of writing in pre-colonial Africa I will further outline later in this essay (Molins Lliteras (2013), p.106). Cross-validating Leo Africanus's narrative with the findings from Timbuktu's libraries, we can thus get a reliable picture on the extent of human capital accumulation in the pre-colonial era.

3. Colonialism and Education and the Case Study Problem

The current body of academic literature on the colonial era's impact on educational attainments in Africa largely finds evidence supporting a positive colonial legacy, with the degree of influence varying depending on the identity of the coloniser as well as the confessions which predominated missionaries. British colonisers are considered to have been most successful in promoting local education. In 1950, primary school enrolment

⁷ See source text attached to this essay.

rates in British colonies were on average larger than elsewhere (Frankema (2012), p.337). Moreover, the different educational trajectories in the French and British parts of former German Togoland after its division support this idea (Frankema (2012), pp.337f.). This difference in performance has been attributed to differences in colonial policy: while the French relied largely on government schools, the British outsourced their education to private actors, especially Christian missionaries, which seems to have been a superior strategy given the limited colonial budgets (Frankema (2012), p.337). In addition to differences between colonies, research has also detected differential impacts of different types of missions, finding the Protestant missions to have had a stronger impact on literacy attainments than Catholic ones (Nunn, Akyeampong, Bates and Robinson (2011)).

Previous analyses of the question of colonial educational legacy can be divided into case studies and “macro” approaches, according to their unit of analysis. The former category uses case studies to approach the question, looking at specific regions within colonies. Meier zu Selhausen and Weisdorf (2015) use data from protestant marriage registers in Kampala (Uganda), which include background information on the spouses. Information on literacy is inferred from the signature on the records: in cases where spouses were unable to sign, the vicar would sign on their behalf (Meier zu Selhausen and Weisdorf (2015), p.5). Based on these data, they argue that colonial Africa saw a “literacy revolution” with the advent of the colonial regime, as their measure of literacy rates shows a rise from 0 to almost 100 percent over three generations (Meier zu Selhausen and Weisdorf (2015), p.2). However, they find that for females, the revolution came with a lag of about 30 years compared to males (Meier zu Selhausen and Weisdorf (2015), p.2). In addition to their measure of literacy, they use the HISCLASS system to classify occupations into blue- and white-collar work and according to the required skill-level. Using this classification, they find that the transition from blue- to white-collar work also took, on

average, a longer time for women than for men. They ascribe the belated catch-up to later colonial efforts to “Africanise” civil service and to emerging job opportunities for females in mission schools as well as hospitals (Meier zu Selhausen and Weisdorf (2015), pp.13ff.).

While these results are interesting in themselves, the limited scope of the analysis has to be kept in mind. This does not only apply to the limited geographical coverage, but also to the part of the population the data covers. As the authors state, around two thirds of all marriages in Kampala were Catholic (Meier zu Selhausen and Weisdorf (2015), p.5). However, Catholic registrars did not follow the tradition of compiling background statistics on the spouses, so that only information on the Protestant population is available (ibidem). As these made up one third of the marriages, it is possible that the results of this study did not apply for the majority of the population. This seems to be a particularly severe problem in the light of other studies, which find an overall positive effect of Protestant missionary education, as opposed to no significant overall effects of Catholic ones (Nunn et al. (2011)).

Larger scale studies focusing on bigger parts of the African continent, though potentially ignoring regional specifics, can solve the problem of impossible generalisation inherent to the case study approach. Using this approach, Nunn et al. (2011) link data from the Afrobarometer surveys with a map of Protestant and Catholic missions in Africa in 1924 and find Protestant missions to have had a positive effect on contemporary educational outcomes, whereas overall the effect of Catholic missions is insignificant. Analysing educational outcomes in a gendered framework, they find that only Protestant missionaries have had a persistent positive effect on female educational outcomes, which they ascribe to the emphasis of Protestant missions on teaching to read the Bible.

4. Problems arising from Eurocentrism in the current Literature

These studies give a strong impression that in expanding into Africa, the colonists ventured into an area of intellectual void, without pre-existing human capital. This is particularly well reflected in the description of a colonial literacy revolution in one of the studies, with literacy “rising from 0 per cent to nearly 100 per cent” (Meier zu Selhausen and Weisdorf (2015), p.2). In contrast, Leo Africanus’s account of his travels to Timbuktu in the 16th century paints a very different picture of pre-colonial human capital: He states that Timbuktu was home to a *“great store of doctors, judges, priests, and other learned men, that are bountifully maintained at the kings cost and charges”*, suggesting the existence of a flourishing (Arabic) knowledge elite at the time. He further outlines that *“hither are brought diuers manuscripts or written bookes out of Barbarie, which are sold for more money than any other merchandize”*, again underlining the idea of Timbuktu as a centre of learning and intellectual advances, with a flourishing trade in books even across long distances from the “Barbarie”. This richness in pre-colonial written culture becomes further apparent in the recent explorations of Timbuktu’s libraries. As far as they have been analysed, the sources found in the Fondo Kati collection document Timbuktu as a place of economic and intellectual prosperity, attracting scholars and merchants across far distances (Stamm, V. (2014), p. 334). Interestingly, written contracting seems to have been common not only among scholars, but also in commercial circles (ibidem). As Volker Stamm (2014, p.148) argues, albeit its strong ties to Islam, the influence of this culture of knowledge and scripture was by no means restricted to a small region around Timbuktu, but reached far out to the eastern coast as well as southern Africa.

In the light of the role of Timbuktu as a pre-colonial intellectual hub, centred around the written word, the effect of colonial rule on human capital in Africa has to be evaluated with caution. Recent journalistic coverage of the history of the Timbuktu manuscripts goes as far as saying that the decline of the traditional manuscript culture coincided with French imperialism in the region, both because locals felt they had to hide their manuscripts for

fear of being dispossessed by the colonists as well as because French replaced Arabic as the main language taught in schools, thus disconnecting the population from the manuscript traditions (Hammer (2016), p.28). Although more scholarship is needed on this question, the overall evidence points towards an ambivalent picture of the impacts of colonial rule on African human capital: while the widespread introduction of schooling presumably was a positive thing in itself, colonial rule might have at the same time contributed to the destruction of the pre-existing local knowledge culture, for example in the case of Timbuktu, an aspect which has been widely neglected by the literature so far.

Previous studies attempting to quantify the colonial legacy on human capital in Africa do largely not take into account the culture of scholarship and literacy that existed independent of the Christian missionary movement. This ignorance becomes particularly apparent in two aspects: the measurement of literacy and the neglect of potential endogeneity of Christian missionary (and colonial) activity.

Firstly, considering the existence of different forms of writing in pre-colonial Africa, it seems that the use of signatures in registries needs further elaboration with regard to its capture of colonial impacts on human capital. In particular, this measure seems to reflect literacy in Latin script only, which could be the source of an upward bias in the estimates of the colonial legacy in literacy. While it is undeniable that missionary schools introduced literacy in the Latin script on a very large scale, it still seems important to differentiate between this form of literacy and the various forms of human capital that predated the colonial era, ranging from the Arabic language to some other local African languages that knew scripture as well as a rich oral tradition. The case of Swahili is an illustrative example: while in the early 18th century, the written form of Swahili language was using the Arabic alphabet, the colonists introduced the Latin alphabet for writing Swahili (Shoup (2011), p.277). Thus, although it is probable that there was no wide-spread literacy in the

Arabic form of the language before colonial rule, we should be careful in the interpretation of the colonial rule as 'introducing' the written word and literacy by exclusively relying on a Eurocentric measure of human capital.

Secondly, and more severely, previous literature has not taken into account demand-side factors in their analysis of the colonial legacy on African human capital. As Frankema (2012, p.348) points out, African agency has been decisive for the success of missionary activity due to the limited colonial budgets, and missionaries sought to spread out to areas with the highest potential cooperation by the local population. The regional extent of missionary policies was thus endogenous to potential resistance of Islamic populations towards conversion practices (Frankema (2012), p.339). Using a multiple regression framework, Frankema (2012) argues that it was local demand for Christian/Western education specific to the regions covered by the British colonies rather than specific policies that drove their comparatively good educational attainment. Relating this point to the studies discussed earlier, it thus seems important to control for factors influencing the local demand for education. Nunn et al. (2011, pp.8f.), for example, incorporate a number of relevant factors determining the geographical spread of Christian missions, such as the existence of a railway or the percentage of arable land in a region. However, they do not seem to include a control capturing the extent of Islamic culture, which is a potential source of bias as it has been argued that the geographical capture of Islam influences both the spread of Christian missions as well as primary school enrolment rates.

5. Conclusion

In this essay, I have combined information from a primary source yielding information on the state of pre-colonial human capital with secondary sources on the impact of colonialism on educational attainments in order to assess the human capital legacy of the colonial era. Firstly, I have emphasised the caveat of case study approaches used in this

literature, pointing out the limited scope for generalisation of their results. Moreover, I have argued that Eurocentric definitions of human capital potentially distort the measure of human capital improvements brought about by the Europeans. Lastly, I have pointed out a bias potentially resulting from the lack of control variables capturing the endogeneity of missionary activity in Africa with respect to the regional spread of Islamic culture. Thus, I conclude that, with the current state of research, we cannot solidly argue that colonial rule has had a positive impact on human capital in Africa.

Source: OF THE KINGDOME OF TOMBUTO

from: Africanus, L., Brown, R., and Pory, J. (2010). The History and Description of Africa: And of the Notable Things Therein Contained (Vol. 2). Cambridge University Press, Cambridge. (pp. 824-826)

This name was in our times (as some thinke) imposed vpon this kingdome from the name of a certain towne so called, which (they say) king Mense Suleiman founded in the yeere of the Hegeira 610, and it is situate within twelue miles of a certaine branch of Niger, all the houses whereof are now changed into cottages built of chalke, and couered with thatch. Howbeit there is a most stately temple to be seene, the wals whereof are made of stone and lime ; and a princely palace also built by a most excellent workeman of Granada. Here are many shops of artificers, and merchants, and especially of such as weaue linnen and cotton cloth. And hither do the Barbarie-merchants bring cloth of Europe. All the women of this region except maid-seruants go with their faces couered, and sell all necessarie victuals. The inhabitants, & especially strangers there residing, are exceeding rich, insomuch, that the king that now is, married both his daughters vnto two rich merchants. Here are many wels, containing most sweete water ; and so often as the riuer Niger ouerfloweth, they conueigh the water thereof by certaine sluces into the towne. Corne, cattle, milke, and butter this region yeeldeth in great abundance : but salt is verie scarce heere ; for it is brought hither by land from Tegaza, which is fiue hundred miles distant. When I my selfe was here, I saw one camels loade of salt sold for 80. ducates. The rich king of Tombuto hath many plates and scepters of gold, some whereof weigh 1300. poundes : and he keepes a magnificent and well furnished court. When he trauelleth any whither he rideth vpon a camell, which is lead by some of his noblemen ; and so he doth likewise when hee goeth to warfar, and all his souldiers ride vpon horses. Whosoeuer will speake vnto this king must first fall downe before his feete, & then taking vp earth must

sprinkle it vpon his owne head & shoulders : which custom is ordinarily obserued by them that neuer saluted the king before, or come as ambassadors from other princes. He hath alwaies three thousand horsemen, and a great number of footmen that shoot poysoned arrowes, attending vpon him. They haue often skirmishes with those that refuse to pay tribute, and so many as they take, they sell vnto the merchants of Tombuto. Here are verie few horses bred, and the merchants and courtiers keepe certaine little nags which they vse to trauell vpon : but their best horses are brought out of Barbarie. And the king so soone as he heareth that any merchants are come to towne with horses, he commandeth a certaine number to be brought before him, and chusing the best horse for himselfe, he payeth a most liberall price for him. He so deadly hateth all lewes, that he will not admit any into his citie : and whatsoeuer Barbarie merchants he vnderstandeth haue any dealings with the lewes, he presently causeth their goods to be confiscate. Here are great store of doctors, judges, priests, and other learned men, that are bountifully maintained at the kings cost and charges. And hither are brought diuers manuscripts or written bookes out of Barbarie, which are sold for more money than any other merchandize. The coine of Tombuto is of gold without any stampe or superscription : but in matters of smal value they vse certaine shels brought hither out of the kingdome of Persia, fower hundred of which shels are worth a ducate : and sixe peeces of their golden coine with two third parts weigh an ounce. The inhabitants are people of a gentle and chereful disposition, and spend a great part of the night in singing and dancing through all the streets of the citie : they keep great store of men and women-slaues, and their towne is much in danger of fire : at my second being there halfe the town almost was burnt in fiewe howers space.

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The Eighteenth Century Economic Transition in India- Prosperity or Decline?

AMAL SHAHID

This essay will discuss the opposing interpretations regarding the eighteenth-century economic transition in India. The eighteenth century in India marks the transition of structural power from the Mughal Empire to regional political states, as well as the establishment of colonial rule in India by the English East India Company. It has been a subject of contentious debate among historians. The divergent views regarding social and economic reconfigurations in this period are divided into two factions. One looks at the eighteenth century as a period of chaos and decline, calling it the 'Black Century', while the revisionist research seeks to revise this position by replacing it with a picture of economic dynamism. After giving a brief overview of the traditional interpretations, the essay will analyse the issues with the theses, followed by an examination of the revisionist research. Siding with the revisionists, the essay will argue that there was no absolute economic stagnation in eighteenth century India and decline may have been only relative, remaining confined to certain regions or ports. Moreover, the essay will suggest that the intermediaries played a central role in the economic buoyancy of this period.

Early interpretations of eighteenth century India were dominated by the notion of economic decline. The view that this period saw anarchy and deurbanisation due to a predatory bureaucratic state was first propounded by Bernier, followed up initially by

Moreland (1923) and later by the Aligarh School of historians. Irfan Habib (1960, 1998, 2012) put forward the view that the centralised Mughal state imposed heavy taxes on peasantry, and the revenue assignment system provoked the assignees to extract as much as possible from the land grant. Therefore, there was no incentive for the Mughal nobility to invest in agricultural development. This excessive extraction and oppression of the peasantry resulted in an 'agrarian crisis' and regional assertion, subsequently leading to the downfall of the Mughal Empire (Habib, 1960).

Moreover, since the commercial economy of the empire depended on agrarian exploitation, there was no rural market for urban crafts (Habib, 1969). Goods in demand were usually luxury commodities or for the military. Furthermore, the technological and intellectual stagnation in India prevented the emergence of towns as 'safety valves' for the oppressed (Ali, 1975). It also made Indian trade more vulnerable to competition.

Given the presence of usury-driven merchant capitalism (Washbrook, 2007), any potential capitalistic development was restricted. Thus, a weakened and disintegrated empire paved the way for foreign conquest (Habib, 1969).

In the same vein, Imperialist historians saw the eighteenth century as a 'Dark Age', characterised by Marx's notion of the 'Asiatic Mode of Production'. According to them, Indian society under the Mughals was underdeveloped, further impoverished by the fragmentation of the empire into regional states. But, under colonialism and globalisation of the nineteenth century British rule, modernisation and economic growth

were introduced in India. Hence, British capitalism and political intervention restored order and progress in the economy (Stein, 1989).

Thus, the above interpretations seem to ignore the ways in which Mughal institutions were being adopted in a modified form at the regional levels (Alavi, 2002). There was a shift, rather than a decline of the central power, and hence, no political disorder (ibid).

Moreover, there is a tendency to confuse the waning of an erstwhile empire with an economic eclipse. It has been erroneously assumed that regionalisation resulted in economic disorder. However, if there had been an economic stagnation, it is unclear how trade with Europe in spices, textiles and other commodities could have thrived throughout the century. It is also difficult to believe that a long period of economic vibrancy suddenly came to a complete halt under political disintegration. Moreover, these factors certainly would not have had a uniform effect on all classes and all states in the subcontinent. Ergo, there is a need to revisit the concept of an eighteenth-century decline by shifting the focus to regions and commercial classes.

Given the weaknesses of the traditional hypotheses, the revisionist research counters the belief that the Mughal state was a bureaucratic one. Lack of quantitative evidence implies that there is no way of measuring how much of the revenue was kept by the emperor. But evidence of wealth in other sectors shows that the state did not keep more than a fraction of the total surplus production (Washbrook, op. cit., p.104).

Moreover, the presence of secondary sources of authority, the community institutions,

further indicates that the state apparatus was not as overwhelming as has been assumed.

Therefore, revisionist research challenges the notion that the Mughal state was centralised; furthermore, it highlights the dynamism of the Indian economy by showing how the state was dependent on the local power of chiefs and commercial intermediaries. Contrary to earlier interpretations, a weakened central authority did not suppress enterprise, rather, it empowered these classes. These intermediaries had gained importance under the Mughal Empire and remained pivotal to the consolidation of new successor states (Bayly, 2012). The demand by the new states for regular payments of revenue in cash linked villages to markets and, thus, encouraged commerce. There, thus, emerged a cross-caste mercantile organisation involved in politics (ibid).

Therefore, the link between politics and economy was a close one but not necessarily an antagonistic one. Taking the case of Awadh, Muzaffar Alam (1996) describes how economic growth caused disturbances by the zamindars. Over the course of seventeenth-century economic growth, these zamindars had established some amount of control over the revenues collected, which enabled them to accumulate assets.

Prevalence of commercialisation and a growing cash nexus reinforced this. Their growing power was integrated with the interests of merchants and peasants, who eventually joined together to weaken imperial control in the region. Hence, a coalescing of merchant and agrarian interests resulted in the emergence of new intermediaries (Bayly, op.cit.) who tried to throw off imperial control.

However, this was not the case with all regional polities. The Sikh states witnessed

economic instability, where their local leaders were unable to draw support from mercantile classes (Alam, 1986). Therefore, while economic growth was seen in most places, some, however, became economically volatile, implying that the extent and degree of commercialisation may have been nevertheless varied. For instance, just as the port of Cambay had suffered a decline with the rise of Surat in the sixteenth century, the port cities of Surat in Gujarat, Masaulipatnam in Madras and Dhaka in Bengal suffered relative eclipse even with European advances. On the other hand, port cities of Bombay, Madras and Calcutta became prominent (Das Gupta, 1979). Therefore, a relative decline of one area does not mean overall decline, but rather may imply a shift of focus to another region.

Another feature of this period was that of gentrification, a process by which service groups of scribes and accountants started investing in small towns (Bayly, op. cit.).

Growth in trade, accounting and revenue collection was accompanied by shift of credit by the banking firms to the regional centres (Leonard, 1979). In fact, by the early eighteenth century, an 'age of banking' could be seen whereby financial capital became more important, leading to the crystallisation of banking houses (Washbrook, op. cit., p. 107).

Thus, the economy visibly moved in new directions with decentralisation and economic density at local levels becoming integrated by networks of trade and monetary transactions (Alavi, op.cit.).

But since India attracted bullion that it did not produce, the East India Company was induced to intervene in internal affairs. The successful intervention of the East India Company was due to its strength in the navy. On the other hand, the early modern states failed to understand the significance of the seas (Washbrook, op. cit., p.105). The Mughals had no navy, and the regional states, instead of backing the sea, gave away important ports to the French or the English.

Thus, with the onslaught of the Company, the focus shifted to foreign capital. David Ludden refers to India's 'tributary commercialism', which attracted the European companies (Bose and Jalal, 1998). With the intermediaries 'straddling the worlds of commerce and political participation' (Subramanyam and Bayly, 1990), the role of merchant capital in military finance became important in the establishment of the East India Company. After 1750, firms like Jagat Seth of Bengal played a significant role in extending credit to the East India Company and eventually helped the latter to establish a stronghold on the Bengali economy. Thus, from the decentralisation of political power after the collapse of Mughal imperial authority to the beginning of colonial rule in India in the eighteenth century, corporate institutions of service gentry and merchant class may have been reshaped according to context but continued to remain the basis of commercial and political life till the early twentieth century (Bayly, op. cit.).

To conclude, the view of an absolute decline becomes obsolete in light of the evidence presented by revisionist research. Decline of an erstwhile empire did not imply economic decline. On the contrary, the economy flourished under the newly formed regional states. Intermediaries made strides in trade and commerce. This resulted in

growth of finance as well as urbanisation. Thus, losses in one area were compensated for elsewhere. However, this also made the subcontinent more vulnerable, leading to the formation of another empire in India. Therefore, the resilience shown by the Indian economy in the eighteenth century counters the notion of a 'Dark age', suggesting the economic transition to be a vibrant one.

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Why wasn't the whole of Germany Industrialized during the period 1870-1914?

DEMAS KOH

The *Deutsches Kaiserreich* (or German Reich, 1871–1918) was a reign of complicated affair, having just ended the Franco-Prussian War, and comprising 27 constituent states. A perennial question for economic historians is: why was it not the case that the whole of Germany was industrialised in the period 1870–1914? In other words, why were Rhineland and Silesia, for instance, heavily industrialised, while the province of Hanover and eastern Prussia much less industrialised, as noted by Gutberlet (2014)? Gutberlet (2014) also points out that, a few decades before this period, steam-powered engines were on the rise and were slowly replacing water power.

Economic historians like Ellison and Glaeser (1999) have argued that the rise of steam-powered industries tended to congregate in areas where coal prices were low, for instance, in the Rhur Valley, and that such rising concentration of industries in particular regions was primarily due to the high transportation cost of coal, as has been affirmed by Crafts and Mulatu (2006). Crafts and Mulatu (2006) have noted that the cotton spinning industry, for example, was co-located with the coal-mining industry because the former relied on steam-powered engines, and coal was very expensive to transport. However, Gutberlet (2014) argues that the concentration of industries in Germany during that time period was not only due to the cost of transportation of coal, but also because of the benefits arising from agglomeration economies, as has been demonstrated by the artificial dye industry around Berlin, which was some distance away from the major coal-mining areas. Curiously, although the argument of technology spillovers seems to hold, Gutberlet has neglected to mention a major development during that period: cartelisation, which Henderson (1975) believes to be of great importance in explaining the concentration of industries. Henderson (1975) points out that scientific research and development tended to be extremely costly but “*could be financed by a cartel*” (Henderson, 1975, p.180). As can be seen, the concentration of industries in certain regions of Germany was a result of a multitude of factors, rather than isolated reasons.

However, while New Economic Geography is helpful in answering why it was not the case that the whole of Germany was industrialised, political history is also required to explain why some areas remained agricultural. Fairbairn (2008) notes that the rise of industrialisation “*does not mean*

that agriculture declined absolutely" (Fairbairn, 2008, p.70); indeed, after the 1870s, agricultural production expanded, and so did the agricultural labour force. To put things into context, one should take a look at the dominant agents in the *Deutsches Kaiserreich*. During the German Reich, the *Junkers*, or aristocratic noblemen who owned large estates, especially in eastern Prussia, gathered to establish the Agrarian League in 1893, thereby putting pressure on political leaders to respond to interests in agriculture. Thus, some regions, inevitably, remained agricultural. Ostensibly, a two-part explanation is needed to answer the question: agglomeration economies were important for the congregation of particular industries, but the socio-political context of Germany, especially Prussia, provides the reason for which some parts of the German Reich remained agricultural.

The chief of arguments for a marked increase in concentration of new industries in some areas of Germany is that the exorbitant transportation cost of coal led to the co-location of steam-powered industries, for instance cotton spinning factories, with major coal-mining areas, like along the Rhine, a notion that is supported by Ellison and Glaeser (1999), and confirmed by Gutberlet: "[A] one standard deviation increase in the average size of steam power operations led to a rise in geographic concentration of approximately one-quarter of a standard deviation" (Gutberlet, 2014). However, on top of this, the geo-economic context is also important, as has been highlighted by Gutberlet (2014): during that time, cotton and cotton yarn imports from England increased, especially in the Rhine and Elbe. Hence, as far as industries that relied on steam-powered engines are concerned, apart from the high cost of transport of coal, which necessitated the co-location of them with coal-mining industries, a consideration of the geo-economic situation of these regions is important too. Moreover, Stolper (1940) points out that trade expansion was evident during this time period, and it was facilitated by an improved modern German banking system with sound financial institutions. Fairbairn (2008) goes as far as to say that the substantial capital provided by German banks, such as *Deutsche Bank*, accelerated the formation of industry clusters that required this capital. Therefore, the high transport cost of coal, the geo-economic context of some regions, as well as the intervention by German banks, were responsible for the co-location of steam-powered industries with coal-mining regions.

The above argument, however, does not seem to hold when scholars attempt to explain why concentration of other industries, for instance artificial dyes and machines, occurred at

considerable distance from coal-mining areas. Indeed, Klein and Crafts (2012) have also cast some doubt on the transport cost argument. Gutberlet (2014) argues that cost savings arising from co-location with coal-mining regions do not explain why some industries congregated away from major coal-mining areas. The newly emerged aniline dye industry (Beer, 1959) is a case in point. Gutberlet (2014) notes that the transport cost of tar might have been an important factor, but it is interesting to note that, after 1907, the artificial dye industry survived mainly in two areas: first, in the upper regions of Rhineland, and second, near Berlin, both of which were not in close proximity to the more important coal-mining areas. Thus, an important question for economic historians is: what, then, resulted in clusters for these industries? Gutberlet (2014) points out that “*the two areas had newly founded technical universities in Karlsruhe (1825) and Berlin-Charlottenburg (1879)*” (Gutberlet, 2014), implying that the technical spillovers from these universities encouraged the congregation of artificial dye firms around one another, in upper Rhineland and near Berlin. Another example is the silk textiles industry, which relied heavily on skilled labour, as noted by Gutberlet (2014), once again demonstrating that agglomeration economies led to industry clusters. Besides, Gutberlet (2014) also underscores the importance of economic forces: the congregation of silk textiles industry was also due in part to the sector’s small size.

Curiously, even though technical spillovers and a specialised labour force arising from agglomeration economies are able to explain the existence of certain industry clusters during the German Reich, Gutberlet has not attached much importance to the major development occurring at that time – cartelisation. According to Henderson (1975), cartels were set up following the economic Panic of 1873 to ensure that firms possess enough market power to continue to survive. Henderson (1975) argues that the formation of cartels accelerated the process of industry congregation, as cartels could shut down inefficient plants very quickly and easily, and step up operations in efficient ones. Additionally, agglomeration economies were also made possible by cartels, as has been noted by Henderson (1975): expensive research and development could not be financed by individual firms; fortunately, cartels channelled substantial amounts of money to allow for such research and development to take place, thereby enhancing technological spillovers. Cartels also possessed the financial ability to set up new companies, and a prime example of a company being financed by a cartel agreement was the Rhenish-Westphalian Coal Syndicate, which was “*successful in eliminating variations in the output of coal... ... [and] reduced*

the effects of cyclical fluctuations of trade" (Henderson, 1975, p.183). This, in turn, ensured that that the major coal-mining industries could continue to thrive in Rhineland and Silesia. The stability of these coal-mining areas was essential for the development of more co-location industries. Indeed, the importance of the cartelisation process should be considered when attempting to explain why it was not the case that the whole of Germany was industrialised in the period 1870–1914. Perhaps, while doing her econometric analysis, Gutberlet should not treat power source and industry location patterns in isolation, but instead take the effects of cartelisation into consideration, too.

Another major development that is worth mentioning is the massive state intervention in the construction of railways to connect the different entities of the German Reich. Even though railway *"advocated by Bismarck in 1876"* (Henderson, 1975, p.212) failed at first, there was still a concerted effort in building and maintaining railway. This, as Gutberlet (2012) notes, permitted greater interconnectivity between provinces, and increased market access, and hence residents in certain provinces, like Hamburg, could enjoy certain raw commodities even though there was no co-location. In other words, particular industries in Rhineland and Silesia could engage in further specialisation and expansion of output to cater to greater demand from other parts of Germany. Therefore, one can see that it is the interplay of multiple factors – transport cost; agglomeration economies; demand and supply; cartelisation; and railway development – that enabled industry clusters to happen. Understandably, some variables may not be easy to quantify or measure in econometric analysis. Nevertheless, this should be born in mind when doing future research in this area.

Furthermore, a closer examination at the types of power source during this time period is necessary. Gutberlet (2014) points out that steam power was slowly gaining momentum, whereas electric power had only barely started. According to Gutberlet (2014), the use of electric power could lead to the reversal of clustering: *"a one standard deviation increase in the fraction of plants with electric motors was associated with a drop in geographic concentration of one-tenth of a standard deviation"* (Gutberlet, 2014). However, during the period 1870–1914, electricity was still not very widely used. For instance, in the glass industry, *"the fraction of plants with steam and electric power reached just 7 per cent in 1907"* (Gutberlet, 2014). Perhaps counterfactually, a more prevalent use of electric power across industries might have resulted in the de-clustering of

industries. Yet, during this period, electricity was not popular yet, and the power sources that were more widely used were steam-powered engines and water power. Thus, it goes without saying that the co-location of certain industries with major coal-mining areas was simply because steam power, and not electric power, was used.

The essay now turns to the second part of the question: why were some regions, such as Hanover and eastern Prussia, hardly industrialised? According to Bade, Germany during this period should be characterised as a “Agrarstaat [*agrarian state*] with a powerful industry to an Industriestaat [*industrial state*] with a strong agrarian base” (Berghahn, 1982). There was not a decline in agricultural production; on the contrary, it increased at about 2% every year during that period (Fairbairn, 2008). Fairbairn (2008) highlights the political power of the *Junkers*, a group of Prussian aristocrats, who could put considerable pressure on the political parties to ensure agrarian interests were met. For example, sugar beets were heavily subsidised by the government, as has been noted by Fairbairn (2008), and by “1907 Germany became the world’s largest producer of sugar with 22 per cent of the global market” (Fairbairn, 2008, p.72). Hence, agency and self-interests are also important in explaining why certain regions, especially eastern Prussia, remained largely agricultural. Barkin (1970) asserts this fact, noting that these *Junkers*, who owned large plots of land in Prussia, reaped a lot of profits from such protectionistic measures by the government. Fairbairn (2008) argues that the Agrarian League, formed in 1893, aptly demonstrates the amount of power that these aristocrats held at that time, and thus it was inevitable that certain regions could not be industrialised, and remained largely agricultural, for the simple reason that it was unconstitutional to engage in industrialisation. Interestingly, many scholars of New Economic Geography have not discussed this, and in order to have a better understanding of why not every region in Germany was industrialised, a multidisciplinary perspective needs to be adopted. Indeed, by including a socio-political examination of the history of the German Reich, one will then be able to understand the reasons for which some provinces remained agricultural.

Moreover, a lot less weight has been given to the socio-cultural aspects of the German Reich. However, it is important to note that, in imperial Germany, “[a]griculture was associated with tradition, with ostensibly harmonious and healthy communities, and with loyalty to monarchy and Christian religion. Industrial cities seemed to be centres of change, danger, disease... ..” (Fairbairn, 2008, p.69-70). Fairbairn (2008) stresses that, while it is indubitable that

industrialisation in selected areas of Germany at that time was gaining speed and was inevitable, there were traditionalists who resisted it, preferring to stick to agricultural production for religious and cultural reasons. This was potentially why some parts of Germany, such as Lower Bavaria, were less industrialised, relative to the Ruhr Valley, Leipzig and Silesia. Economic historians do not usually attach great importance to cultural factors, but the contextualisation of Germany's socio-cultural conditions may allow for a better understanding of why agriculture tended to persist in certain areas.

Finally, although other case studies and articles may not be immediately relevant to Germany, there are certainly insights to be drawn. This may be beneficial for future research. For example, while explaining why it was not the case that the whole of Spain was industrialised during the period 1797–1910, Rosés (2003) has highlighted the important role of regional demand for manufactured goods in the clustering of industries. This should serve as an inspiration for similar research in the future. To build upon Gutberlet's work, perhaps regional demand and supply factors, on top of agglomeration economies, should be included in the regression analysis. Indeed, this may be a potential avenue for future research.

In conclusion, a multi-faceted approach is needed to explain why only some parts of Germany were industrialised during the period 1870–1914. New Economic Geography has its merit, as theories related to factor endowment, access to markets as well as agglomeration economies provide plausible explanations to the concentration of particular industries in certain areas of Germany. In particular, recent explorations in agglomeration economies have solved the puzzle of why some industries congregated at considerable distance from coal-mining areas of Germany. However, a holistic approach is necessary and may even provide deeper insights. This multi-disciplinary approach should combine New Economic Geography with Germany's socio-political history, taking contextual factors into consideration. In this case, the process of cartelisation and the rise of modern German banks facilitated, and accelerated, the clustering of heavy industries in certain provinces of Germany. Moreover, the powerful *Junkers* could exert pressure on political leaders to keep selected areas, especially in Prussia, largely agricultural. For future research in this area of Historical Economic Geography, econometric analyses should assign more weight to such social and political factors, or at least be conducted alongside such a

contextualisation, thereby allowing for a more rigorous treatment of economic history through multiple lenses.

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How did the import of American gold and silver affect the Spanish economy of the sixteenth and seventeenth centuries?

SAMUEL WOOLSTON

The economic effects caused by the import of American gold and silver were inevitably profound owing to the incredible scale of Bullion discoveries exploited by Spanish colonisers soon after Columbus's initial discovery of the Americas in 1492. Spain served as an entrepôt to all American imports of treasure. 447 million pesos equivalent of bullion entered Spain between 1503 and 1660 (Hamilton. 1934). Most bullion was used for coinage, at the peak of production in 1590, and up to 80% of world currency was forged in the Spanish American mints. (Casa Nacional de la Moneda 2015) Between 1503 and 1520, American bullion imports were solely gold, however, this rapidly declined in significance. Overall, between 1500 and 1650, 85% of bullion imports was silver, the most notable mines being that of the Cerro Rico in Potosi, Bolivia, and those in Zacatecas, Mexico. The development of the mercury amalgamation process increased silver production tenfold (Lynch. 1964) and by 1535, silver made up 87% of Bullion imports by weight (Hamilton. 1934). The influxes in American bullion coincides with the European price revolution, 150 years of sustained inflation which was acute in Spain. (Levack. 2007). Whilst the link between the influx of American treasure and inflation in Spain has been contested by economic historians, the intricate correlation between treasure imports and Spanish prices supports the causal relationship as suggested by the monetarist quantity theory of money (Lynch. 1964). I find that the significant impact of American treasure was the European price revolution. Further, Spanish rulers had a paucity of knowledge regarding the monetarist theory (Hamilton. 1934). They favoured instead a Mercantilist philosophy which explains why Spanish policy makers not only failed to take effective action to quell inflation but may have aggravated its impact through erroneous fiscal policy. My essay explores some consequences experienced by Spain resulting from inflation and monetary instability. Whilst inflation initially led to gains for some, by the early 17th century, the Spanish Empire was characterised by economic turmoil and absolute decline. It is not clear if Spain benefited at all in the long run from the import of American bullion. Whilst there is a multitude of ancillary arguments that claim to hold influence over aspects of the Spanish price revolution such as the increasing debasement of currency, I treat the import of American Bullion as a root cause of Spanish economic characteristics and trends prevalent during the 16th and 17th centuries.

The predominant effect of the import of American gold and silver was persistent inflation, caused by an expansion of the money supply at a faster rate than output. As silver coins proliferated, purchasing power fell. Price fluctuations were common in an economy in which agriculture is the predominant sector as prices varied with harvests (Kugler and Bernholz. 2007). However the long-term trend increase in prices was unprecedented and the subject of great confusion in Spain. Prices increased 4.32 times between 1501 and 1609. (Hamilton 1934) The greatest price rises were experienced in Andalucía, where the majority of American gold first arrived on the continent (Hamilton. 1934). This supports Irving Fisher's Quantity Theory of Money which suggests that the money supply and prices are directly related. In the long run, increases in the money supply will be matched by an increase in prices (Heakal. 2016). Adam Smith suggests that "the discovery of the abundant mines of America seems to have been the sole cause of this diminution in the value of silver" (Smith. 1776). Hence, relentless bullion flows to Spain did not equate to large increases in Spain's wealth and output, but rather an increase in prices. In 1600, a Venetian envoy reported that "in all Spain are found a very great scarcity and inexpressible dearness of all things" (Bernholz. 2003). Inflation in Spain was more pronounced than in other European countries. Price levels in France peaked at no more than 1.93 times their early 16th century levels (Hamilton. 1934). Inflation reduced the competitiveness of Spanish exports leading to a trade deficit. David Hume's Price-specie mechanism suggests that trade imbalances were self-correcting given the fixed nature of bullion supply. Trade deficits, caused by high prices, causes bullion outflows, which, in turn, puts downward pressure on prices. This was not the case in 16th-century Spain, which, with a monopoly over American bullion imports, could perpetuate a structurally unbalanced uncompetitive economy, albeit temporarily (Lynch. 1964). Chronic outflows of American bullion led to spread of the price revolution to neighbouring European states.

Spanish price inflation had heterogeneous economic impacts on the Spanish population. Inflation averaged between 1% and 1.5% a year, excessive given the silver coinage. (Kugler 2007) In the long run, inflation eventually harmed the economic position of all members of Spanish society, albeit to varying degrees. Wage earners were immediately adversely affected as inflation decreased the real value of wages. Whilst workers did successfully negotiate frequent increases in remuneration, wages lagged consistently behind the price level (Munro. 2002). Wages were sticky,

the result of menu costs, and could only be updated intermittently. Those with fixed wages were most adversely affected. The consequences of falling wages on consumption depended on the wage elasticities of specific goods. Generally, agricultural goods were less affected by deficient demand than less essential manufactured goods such as textiles. For landowners, the presence of a flexible rent system and rising agricultural prices largely spared them from the harmful effects of inflation (Lynch. 1964). The crown, too, with a theoretically unlimited ability to tax, decreasing real debt value, and ability to increase there appropriated Bullion, were initially less vulnerable to the effects of inflation. Towards the end of the 16th century, as bullion flows ebbed, the Crown relied increasingly on taxation to maintain the unsustainable spending initially allowed for by bullion appropriation. This burden fell primarily on the peasants and labourers, who contributed one-third of their annual income at the beginning of the 17th century. In contrast, the clergy and the nobility were not subject to either direct or indirect taxation (Flynn. 1982). Thus inflation is likely to have disproportionately affected the poor and contributed directly and indirectly to high levels of income inequality. (Lynch. 1964).

Conversely, a possible positive economic impact of inflation was the creation of profit inflation due to the lag in wages behind prices. Taking 1501-10 as the index year, real wages fell to 88.08 by 1546-50 and were depressed at roughly this level until the turn of the century. This would increase industry profits which could be used to finance investment and encourage enterprise. (Munro 2002) However, Hamilton believes that Spanish profit inflation was insignificant in comparison to greater profit inflation in England, where indexed wages fell to 68.6 in the quinquennial from 1616 (Munro. 2002). Whilst profit inflation is given as a factor that might have contributed to the Industrial Revolution in England, Spain was marked by an industrial decline from the 17th century, indicating that either profit inflation was not a significant incentive for capitalists in Spain or alternatively profits were squandered on consumption rather than investment in the domestic economy (Munro. 2002). Whilst the growth of industrial towns such as Segovia and Toledo suggests industry survived and perhaps benefitted from the initial effects of the price revolution, ultimately, the 17th century was marked by an absolute industrial decline as exports became increasingly uncompetitive and domestic consumers switched to imported goods (Kamen. 1978).

One of the factors that caused an exacerbation of the effects that American Bullion had on the Spanish economy was the prevailing European mercantilist philosophy. It is clear that the Spanish government was unaware of the monetary effects of increasing the money supply. (Lynch 1964)

The American treasure discoveries were hence perceived as a windfall of wealth for the Spanish empire to claim. Both Charles V and Phillip II believed that this was a signal that the Spanish Empire was thus favoured by God, and the new wealth of silver should be used to enhance the Empires effort to spread Catholicism throughout Europe (Flynn. 1982). The illusionary wealth flowing into Spain justified to the crown the feasibility of an overly aggressive foreign policy. This was particularly acute under the rule of Phillip II, who oversaw the War of Portuguese succession in 1580, the construction and defeat of the Spanish Armada in 1688 and the beginning of the 80 Years War with the Netherlands in 1568. Foreign commitments led to chronic overspending. In 1576, spending was 45.4 million ducats whereas government receipts, including bullion, were 29 million ducats. (Flynn 1982) Deficits were funded through excessive borrowing, backed erroneously through a perceived infinite wealth of American silver. In the decade from 1590, interest on the crown debt was in excess of not only the Crowns 28.5% portion of the American Silver imports, but also total silver imports that totalled 69,613,162 real pesos* (Hamilton. 1934). This excessive debt became unaffordable. Spain became the first nation to default on its debt in 1557 before subsequently defaulting again in 1560, 1575 and 1596. 66% of the accumulated debt was interest charges (Flynn. 1982). The repeated nature of these debt crises alludes to how blinded decision-makers were by mercantilist dogma despite increasing links between inflation and bullion inflows. Hamilton suggests that there are “few instances of such utter disregard by statesmen of sound advice.” (Aston 2012 pp169) Rulers were loathed to have accepted causes of inflation which countered the Mercantilist dogma. Explanations of Spain’s declining economy were instead attributed to factors ranging from “speculation by alien capitalists,” postulated by Hernan Cortes, the conquistador who claimed Mexico, to the “Idleness of Women” by Tomas de Mercado (as quoted in Hamilton. 1934, pp 291). This rendered the Spanish crown impotent in effective policy-making. The combination of mercantilism with the American silver discoveries is a likely reason for the disastrous economic consequences of the inflow of American treasure (Hamilton. 1938).

Further, surges in American bullion allowed the Spanish Crown to ignore domestic investments and policies designed to increase the competitiveness of industry. Unlike competing European mercantilist governments, who placed great importance on the competitiveness of industry to win favourable trade balances and bullion inflows, Spain became increasingly dependent on flows of stolen bullion. In a stark prideful exclamation, Alonzo Nunez de Castro proclaimed “all the world serves (Spain) and she serves nobody,” (Cipolla. 2004, pp186). Spain’s domestic products became increasingly costly vis-a-vis Europe, leading to reduced exports and increased imports, funded through American treasure. The resulting industrial decline was absolute in Spain. Between the last quarters of the 16th century to the 17th century, ship tonnage decreased by 75% and manufacturing centres such as Toledo and Valladolid lost in excess than half their inhabitants (Hamilton. 1938). The Arbisstras complained of excessive foreign military commitments crowding out domestic priorities. Proposals such as irrigation of fields increased investment in ensuring the navigability of rivers were largely a subject of ridicule (Elliot. 2002). In 1665 in a letter to the Crown, Martinez de Marta wrote: “Your majesty says that from 1649 to 1654 you have spent 66,865,000 ducats in the necessary expenses of war. If all these expenses had been contracted within Spain, how much advantage would have accrued to the royal exchequer, and how your subjects would have benefitted!” (Kamen. 1978, pp30) As the marginal cost of extracting bullion increased and the value of bullion decreased, the Spanish empire, once the envy of Europe, became little more than dead weight on public finances. (Kamen 1978) Reduced bullion and deindustrialisation caused the Crowns increasing reliance on monopoly rights to secure revenues, none more infamous than that of the Mesta of Castile. The privileges granted such as the right to keep migratory herds are largely condemned as a factor that undermined productive tillage and property rights augmenting agricultural inflation (Kamen. 1978). Hence, declining American treasure coupled with an inept elite meant that the Spanish economy was unable to survive the dramatic cessation of treasure inflows that marked the 17th century (Hamilton. 1938).

To conclude, the effects of the importation of American treasure in the Spanish economy are challenging to summarise. Comparing CPI baskets between countries can be problematic owing to differing consumption patterns and availability of price data. However, the overwhelming upward price trend in Spain during the 16th and 17th centuries and its intricate relationship to bullion flows leaves little doubt with regards to the primary effects of bullion imports. The monetarist explanation

is certainly more convincing than alternative theories posited suggesting that the price revolution was the result of monopolistic practice, usury and population growth (Kugler and Bernholz. 2007). “Inflation is always and everywhere a monetary phenomenon.” (Friedman 1970 pp11). Inflation had a heterogeneous impact on different members of society, however, as it seems poorer labourers were affected to a greater degree than the Crown and the nobility. Whilst the price revolution might have created an initial benefit to merchants and capitalists in the 16th century, the damaging and precipitous economic decline experienced by Spain in the 17th century suggests bullion inflows had a negative long term impact on the Spanish economy. Even Spain’s “rise” in the 16th century was predominantly illusory. Despite the appearance of opulence created by the massive import of stolen bullion, and the new consumer products accruing from Spain’s new found command of near the entire South American continent, its peoples largely remained impoverished. Francesco Guicciardini commented on the Spaniards “desire to be rich in the midst of poverty” (Kamen. 1978, pp28). The harmful effects of bullion were exacerbated by inept policy making, a result of a lack of understanding of monetarism and the pervasive mercantilist beliefs that marked this era. Bullion was perceived to be an easy source of wealth able to afford an unaffordable foreign policy. Investments were not seen as necessary for defending the faith and therefore ignored. The relief of the need to run trade balances is likely to have inhibited economic development in Spain whilst England and the Netherlands went forward to create vast trading empires. To sum, the immediate economic effects of importing large quantities of American gold and silver were mixed but largely detrimental. In the long run, I find American bullion inflows to be the most significant factor in explaining the economic decline of Spain in the 17th century.

Notes

*The peso values calculations are using the peso value fixed to 450 maravedis worth of gold or silver, equivalent to 42.29 grams of pure silver.

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