

Data Appendix: Slavery, Institutional Development, and Long-Run Growth in Africa, 1400–2000

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November 8, 2004

1 Overview of the Data Construction

To construct measures of country-level slave exports, I rely on two kinds of data. The first are shipping records, that report the total number of slaves exported from each port or region of Africa. These data provide an estimate of the total number of slaves exported from each country of Africa, but they do specify where the slaves were originally from. To overcome this problem, I combine the shipping data with other data from a variety of different sources that provide information on the ethnic identity of the slaves shipped. I call these data ethnicity data.

The general procedure that I use is as follows:

1. Using the shipping records, the total number of slaves shipped from each coastal country or region is calculated. For some exports only the general region of departure is given. The ethnicity data are used to disaggregate these exports between the region's coastal countries.
2. I map each African ethnicity to modern political boundaries and calculate a cross-country distribution of the origin of all slaves in the ethnicity samples. The distribution covers all countries, coastal and interior.
3. Using the distribution of slaves from the ethnicity samples, I estimate the fraction of slaves shipped from each coastal country that would

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have come from countries located inland of that coastal country. I use this to estimate of the number of slaves taken from interior countries. I also use this information to adjust downward the export figures from each coastal country.

4. For some countries the exports of slaves from its coast are not representative of the slaves taken from the country. This is because for some countries the amount of coastline is small in proportion to the country because a large part of the country is locked behind other countries. This is a particular concern for Zaire and Guinea. A map of each country is shown in Figures 1 and 2. From the maps, one can see that slaves from Guinea may have been taken to coastal Sierra Leone or Liberia and shipped from there. Similarly, slaves from Zaire may have been taken to the coast of Congo, Gabon or Angola and shipped from there. This is a particular concern later in the slave trade when slaves are being taken from further and further inland. For these two countries, a greater reliance is placed on the ethnicity data to establish the origins of slaves shipped from the coast.

The procedure that I use is best illustrated with a simple example. Figure 3 shows an artificial map of the west coast of Africa. The map shows five countries, labelled Country A to Country E.

In the first step, I calculate the number of slaves shipped from the ports of each country. These figures are calculated from the shipping data. Assume that, as shown in the figure, I find that 100,000 slaves are shipped from the coast of Country A and 250,000 are shipped from the coast of Country C.

In the second step, I use the samples of slaves for which I know their ethnicity. I map the slaves' ethnicities to modern political boundaries using a concordance that I have constructed. This concordance is described in more detail in Section 1.1 and a copy is provided in Appendix A. Using the concordance, I am able to calculate for my sample the distribution of slaves from all countries, coastal and interior. Assume that the distribution between each coastal country and the countries to the interior is as follows.

1. Country A : Country B = 4 : 1
2. Country C : Country D : Country E = 3 : 1 : 1

In the third step, I correct for the fact that slaves shipped from the coast may have been from the inland countries. I assume that slaves shipped from Country A are either from Country A or Country B, and that slaves shipped

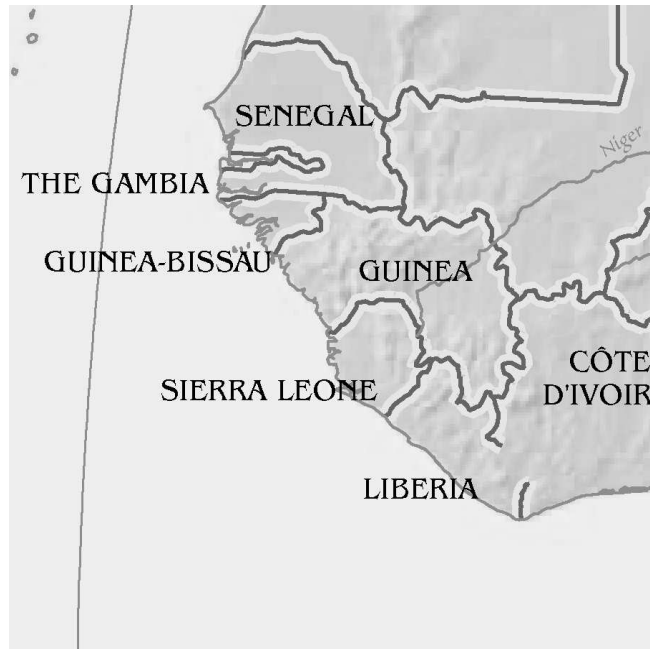


Figure 1: Map of Guinea and surrounding countries.

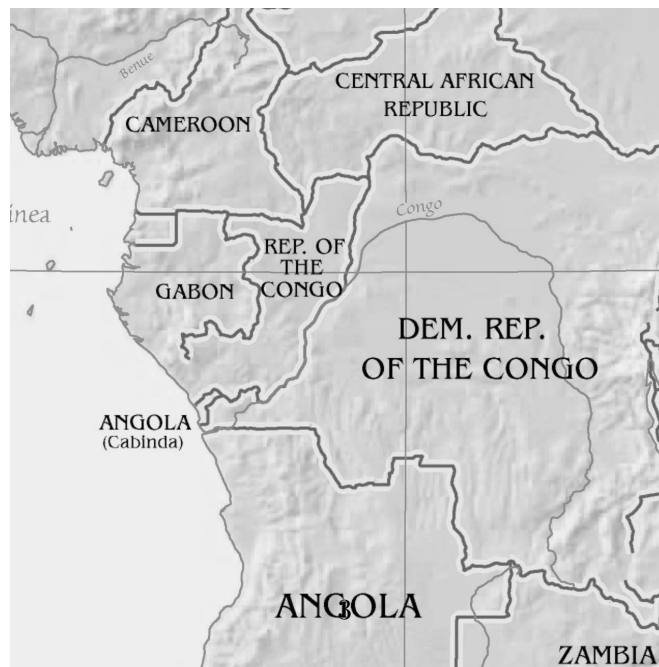


Figure 2: Map of Democratic Republic of the Congo (Zaire) and surrounding countries.

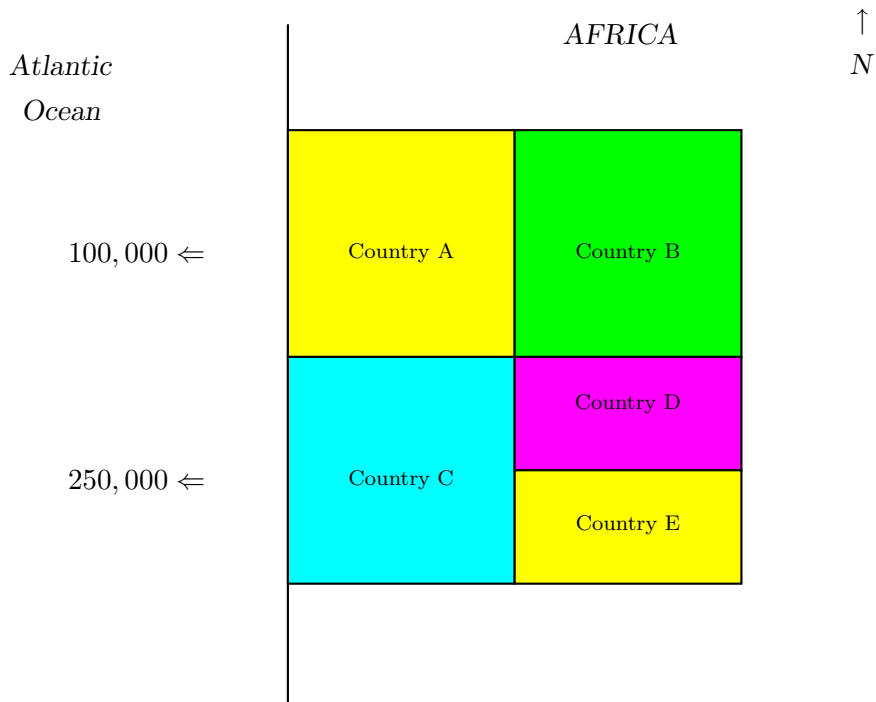


Figure 3: Artificial Map of the West Coast of Africa.

from Country C are either from Country C, Country D or Country E.¹ Based on the distribution from ethnicity data, I assume that 1 of every 5 slaves shipped from Country A would have been from Country B. Similarly, 1 of every 5 slaves shipped from Country C would have been from Country D, and 1 of every 5 would have been from Country E. Using this information, I calculate an estimate of the number of slaves that came from each country. For this example, the calculations are as follows:

$$\begin{aligned} \text{Slave exports from Country A} &= 100,000 \times 4/5 = 80,000 \\ \text{Slave exports from Country B} &= 100,000 \times 1/5 = 20,000 \\ \text{Slave exports from Country C} &= 250,000 \times 3/5 = 150,000 \\ \text{Slave exports from Country D} &= 250,000 \times 1/5 = 50,000 \\ \text{Slave exports from Country E} &= 250,000 \times 1/5 = 50,000 \end{aligned}$$

¹In the paper, I consider the validity of this assumption using alternative data. I find that this assumption is valid for at least 85% of the slaves shipped during the trans-Atlantic slave trade. See Section 3.2 of the paper for more details.

In the fourth step of my procedure, I use the ethnicity data to adjust for the fact that in reality countries in Africa are not shaped like blocks, as my stylized example assumes. Adjustments are made for coastal countries that have a large part of their country landlocked behind another country. I use the distribution found in the ethnicity data to adjust the export figures of Zaire, Congo, Gabon and Angola. I also do this for Guinea, Sierra Leone and Liberia. The exact procedure is described in detail below.

1.1 Ethnicity Data: General Description and Issues

To link the ethnicity of each slave to a modern country, I consulted a number of resources. I relied primarily on Murdock (1959), Moseley and Asher (1994), Grimes (1996) and Curtin (1967). For a small number of ethnicities I also consulted Hunter (1956), Malherbe (2000) and Greenberg (1966). I have created a map showing the relationship between the ethnicity data and the current political boundaries. This is shown in Figure 4. The concordance that was created to aggregate the number of slaves exported at the ethnicity level to the national level is reported in Appendix A.

1.1.1 Ethnicities that Cross Borders

Although the ethnicities are much finer than current political boundaries, there are instances where an ethnicity is not contained within the borders of one country. The major ethnicities for which this was a problem are the Kongo, the Mbete and a number of ethnicities that belong to both Togo and Benin.² In these cases the earliest distribution of the population between the countries is used as weights when assigning the proportion of slaves from that ethnicity to each of the countries.³ This procedure will be problematic if there is reason to believe that some areas of the population were slaved more intensely than other. If this is the case, then today's distribution will not be representative of the distribution during the slave trade. However, for the ethnicities above, the countries that the ethnicities border are coastal countries and there is no reason to believe that the ethnicities in one country would have been slaved significantly more than the ethnicities in other countries.

²The Yao, which currently live in Mozambique and Malawi, are not included in this list. This is because the migration of the Yao from Mozambique to Malawi did not occur until the second half of the nineteenth century. Prior to this time the Yao lived within the boundaries of Mozambique (Alpers, 1969; Northrup, 1986). Therefore, I map the Yao to Mozambique only.

³In all cases these are post-colonial population proportions.



Figure 4: African Ethnicities and Current Political Boundaries. Source: Map created by author using ArcMap software and data on tribal boundaries from Murdock (1959).

The population distribution of the ethnicities that are located in both Benin and Togo are taken from Grimes (1996). Aja-Gbe: Benin 76.5% and Togo 23.5%; Gen-Gbe (Mina, Popo, Ge): Benin 38.5% and Togo 61.5%; Tem (Cotocoli): Benin 17.4% and Togo 82.6%. The population distribution for the Kongo is taken from Moseley and Asher (1994): Zaire 58%, Congo 20% and Angola 22%. The population distribution for the languages of the Upper Congo (Mbeté) is taken from Grimes (1996): Gabon 36%, Congo 64%.

1.1.2 The Re-Export of Slaves at Entrepôts

I do not want to falsely attribute slaves imported and then exported from an entrepôt as coming from the entrepôt country. During the slave trade a number of regions served as entrepôts. The Cape of Good Hope is one example. Reported in the shipping data are two instances where slaves are exported from the Cape; one ship in 1823 and another in 1824. To estimate the ethnic origins of the slaves on these voyages, I look at the origins of the slaves imported to the Cape in the years before 1823. In total, six voyages, from 1782 to 1818, carrying 2,169 slaves disembarked at the Cape of Good Hope. Of the 2,169 slaves, 163 (7.5%) were shipped from Elmina, while 2,006 (92.5 %) were shipped from Mozambique.

Ships sailing from São Thomé and Príncipe also carried re-exported slaves rather than slaves from the island. Unfortunately, the data set does not include any voyages with slaves sold to São Thomé and Príncipe, so an estimate of the ethnicity of imports cannot be made using this data. However, Curtin reports that in the sixteenth century 20% of imports into São Thomé were from the Bights of Benin and Biafra and that 80% were from the Congo-Angola area (Curtin, 1969, p. 100). I use these numbers to estimate the regions of origin for slaves shipped from the islands.

The data set contains nine voyages from the Mascarene Islands (Mauritius and Reunion) and three from the Ile de France (Mauritius); all between 1778 and 1809. The data set only contains one voyage to Mauritius or Reunion. The voyage departed from Kerimba for Mauritius in 1860 with 846 slaves onboard. Other sources of information on the ethnicity of domestic slaves are also available. These data can be used as a proxy for the ethnic origins of slaves re-shipped from the islands. From census data from 1820 to 1832 Valentine (2000) calculates that of the 9,742 slaves of African origin, 5,920 were from “Mozambique” and 3,822 were from Madagascar. The ethnic identification of “Mozambique” included any slave taken from mainland Africa. It included the Macoas, Mondjavoas, Senas, Moussénas,

Yambanes, Mouquindos, Maravis, Macondès, and Niamoëses (Alpers, 1999, p. 1). Cheney et al. (2003) also report data from sales records that report the ethnicity of slave from Mauritius. It is reported that of the slaves from Africa, 259 were from “Mozambique” and 172 were from Madagascar. Both sources indicate a ratio of about 1.5 to 1 for the ratio of mainland slaves to slaves from Madagascar. This is the ratio that I use in the calculations.

In the shipping records, there are 20 voyages between 1609 and 1842 that record the Cape Verde Islands as their port of slave purchase. The database also reports 66 voyages, between 1754 and 1863, with “Cape Verde Islands, Azores, Canary Islands” as the major region/port of sale. The origins of the slaves exported to the Cape Verde, Azores and Canary Islands is used as a proxy for the origins of the slaves shipped from the Cape Verde Islands after 1700. For the slaves purchased in the 1600s, I assume that the slaves came from Senegambia and Guinea Bissau. This assumption is based on data from Pavy, 1967, p. 36.

2 Trans-Atlantic Slave Trade

2.1 Overview of the Slave Ethnicity Data

The data that report the ethnicities of slaves shipped during the trans-Atlantic slave trade come from a number of different sources. A summary of the sources consulted is reported in Table 1.

One potential problem with the sample of ethnicities that I have collected is that the sample may not be representative of the entire slave trade. My samples may not over-sample some destination countries, some nationalities of the carriers, or certain time periods. Mis-representing the first two dimensions do not appear to be problematic. Paul Lovejoy writes that the “destination in the Americas does not appear to have been a significant factor affecting the make-up of ship consignment of slaves” (Lovejoy, 1994, p. 158), while Eltis and Engerman write that “in the nineteenth century, war and the illegal nature of the trade made national flags largely meaningless” (Eltis and Engerman, 1992, p. 239). However, the temporal dimension does appear to be important. Slaves were taken from very different regions in each century. As well, slaves were taken from further inland later in the slave trade. Because an important part of the construction of the estimates are the calculations of the proportion of slaves from inland countries, this bias is particularly important. For this reason, I group the ethnicity data and shipping data into the following time periods: 1450–1521, 1527–1599, 1600–1699, 1700–1799, 1800–1866. I calculate slave exports separately for

each time period.

Table 1: Slave Ethnicity Data: Trans-Atlantic Slave Trade

Region	Years	Num. Ethnic.	Num. Obs.	Record Type	Source
Valencia, Spain	1482–1516	25	2,651	Crown Records	Hair (1980) ^a
Dominican Republic	1547–1591	11	27	Records of Sale	Larrazabal Blanco (1967)
Peru	1548–1560	16	207	Records of Sale	Lockhart (1968)
Mexico	1549	12	83	Plantation Accounts	Aguirre Beltran (1946)
Peru	1560–1650	27	7,573	Notarial Records	Bowser (1974)
Lima, Peru	1583–1589	15	288	Baptism Records	Tardieu (2001)
Colombia	1589–1607	6	20	Various Records	Pavy (1967)
Mexico	1600–1699	26	406	Records of Sale	Aguirre Beltran (1946)
Dominican Republic	1610–1696	20	55	Government Records	Larrazabal Blanco (1967)
Chile	1615	6	140	Sales Records	Mellafe (1959)
Lima, Peru	1630–1702	33	411	Parish Records	Tardieu (2001)
Peru (Rural)	1632	25	307	Parish Records	Tardieu (2001)
Lima, Peru	1640–1680	33	936	Marriage Records	Tardieu (2001)
Colombia	1635–1695	6	19	Slave Inventories	Pavy (1967)
Guyane (French Guiana)	1690	12	69	Plantation Records	Debien (1974)
Colombia	1716–1725	19	58	Government Records	Granda Gutiérrez (1971)
French Louisiana	1717–1769	109	6,315	Notarial Records	Hall (2000)
Dominican Republic	1717–1827	8	15	Government Records	Larrazabal Blanco (1967)
South Carolina	1732–1775	39	907	Runaway Notices	Littlefield (1981)
Colombia	1738–1778	11	109	Various Records	Pavy (1967)
Spanish Louisiana	1770–1803	109	6,615	Notarial Records	Hall (2000)
St. Dominique (Haiti)	1771–1791	30	5,433	Sugar Plantations	Geggus (1999)
St. Dominique (Haiti)	1778–1791	36	1,293	Coffee Plantations	Geggus (1993)
Guadeloupe	1788	8	55	News Paper Report	Debien (1974)
Cuba	1791–1840	55	3,218	Slave Registers	López Valdés (1986)
St. Dominique (Haiti)	1796–1797	51	5,723	Plantation Inventories	Geggus (1978)

Table 1: Overview of Slave Ethnicity Data: Trans-Atlantic Slave Trade, continued

Region	Years	Num. Ethnic.	Num. Obs.	Record Type	Source
American Louisiana	1804–1820	109	5,389	Notarial Records	Hall (2000)
From Central Sudan	1804–1850	58	108	Slave Interviews	Lovejoy (1994)
Salvador, Brazil	1808–1842	19	662	Records of Manumission	Nishida (1993)
Trinidad	1813	115	13,346	Slave Registers	Higman (1984)
St. Lucia	1815	44	2,638	Slave Registers	Higman (1984)
St. Kitts	1817	36	2,886	Slave Registers	Higman (1984)
Berbice (Guyana)	1819	40	1,142	Slave Registers	Higman (1984)
Salvador, Brazil	1819–1836	14	1,105	Manumission Certificates	Reis (1993)
Salvador, Brazil	1820–1835	13	1,341	Probate Records	Reis (1993)
Sierra Leone	1821–1824	68	638	Child Registers	Jones (1990)
Rio de Janeiro, Brazil	1826–1837	36	1,906	Prison Records	Karasch (1987)
Anguilla	1827	8	30	Slave Registers	Higman (1984)
Rio de Janeiro, Brazil	1830–1852	470	4,034	Free Africans' Records	Karasch (1987)
Rio de Janeiro, Brazil	1833–1849	39	1,735	Death Certificates	Karasch (1987)
Salvador, Brazil	1835	13	277	Court Records	Reis (1993)
Salvador, Brazil	1838–1848	11	250	Slave Registers	Nishida (1993)
Sierra Leone	1848	63	7,302	Linguistic and British Census	Curtin (1969)
Salvador, Brazil	1851–1884	13	410	Records of Manumission	Nishida (1993)
Salvador, Brazil	1852–1888	10	294	Slave Registers	Nishida (1993)
Kikoneh Island, Sierra Leone	1896–1897	11	190	Fugitive Slave Records	Grace (1975)
Total			88,616		

Notes: 88,616 slaves represents about .8 % of all slaves shipped during the trans-Atlantic slave trade. The number of ethnicities corresponds to the number of ethnicities that could be identified. As well, the sample size reported is the sample of those slaves whose ethnicities could be mapped to modern countries. ^a The identification of some ethnicities was made using Bühnen (1993).

2.1.1 Combining Two Incomplete Sources: Koelle's Linguistic Inventory and the Sierra Leone Census of 1848

During the 1840s the linguist Sigmund Koelle took an inventory of the languages present in Sierra Leone. Those interviewed were generally freed slaves. Among the questions asked was the date of capture and the number of other slaves speaking the same language living in Sierra Leone at the time. This census is valuable because it very precisely documents the ethnicities of the population of freed slaves in Sierra Leone at the time. The shortcoming of the data is that for large ethnicities only rough numbers are known. For example, Koelle often lists "several thousand", "many" or "few" as the number of individuals of a certain ethnicity living in Sierra Leone. Only for the following 11 countries are exact numbers given: Burkina Faso, Togo, Niger, Chad, Cameroon, Equatorial Guinea, Gabon, Congo, Zaire, Malawi, and Mozambique. This data source is valuable because it is the most ethnically detailed sources of data on slaves from the region north of the Congo river. For this reason, use the data as much as its shortcomings allow.

To the list of complete countries I could include Angola, except that one ethnicity is listed as "many". I impute a number for "many" in the following way. Using a sample of 385,500 slaves from central African ports known by the British Foreign Office between 1817 and 1843, taken from Curtin (1969),⁴ I calculate the ratio of slaves taken from Gabon, Equatorial Guinea, Congo and Zaire to the ratio of slaves taken from Angola. I assume that slaves shipped from Gabon, Cape Lopez, Mayumba, Loango, Malembo, Cabinda and the Congo River are from the northern countries, while slaves shipped from Angola, Ambriz, Luanda and Benguela are from Angola. Doing this, I find that 248,000 slaves were shipped from the northern countries and 237,500 were shipped from Angola. I then calculate the value of "many" in Koelle's sample that give the same ratio between the northern countries and Angola that is observed in the sample of 385,500 slaves. The calculated value of "many" is 142. Is this number reasonable? It is reasonable to believe that "many" does mean more than 100. This is because specific numbers are given for numbers including and less than 100. Lower numbers are indicated by "few" and only one indication is given of a value more than "many". This is "several thousand". One can compare the ratio of Angolan slaves to slaves from Zaire that is implied by the estimate. It is 1.7 to 1. This is roughly consistent with the aggregate estimate from all complete

⁴I use this sample because it is large and consistent with the time period of Koelle's sample. Further, Curtin (1969) writes of the sample that it "is the best sample we have for Central and southeastern Africa" (p. 258).

sources. For these two reasons I feel that the imputation is reasonable.

This sample can be further expanded using the 1848 Sierra Leone Census. The census is complete, but only categorizes individuals into broad ethnic categories (19 in total). However, the census does provide the following reasonably good estimate of the distribution of freed slaves from the countries west of the Bight of Biafra: Cameroon (470), Nigeria (9,621), Ghana (168) Benin/Togo (1,075), Ivory Coast (0), Liberia (60), Sierra Leone (652), Guinea (253), Guinea Bissau (0) and Senegambia (16).

Because the Census and Koelle's sample both have data for Cameroon, I am able to link the two distributions. In Koelle's sample the number of slaves from Cameroon is 265. This suggests a ratio of .56 to 1 between Koelle's sample and the Census. Adjusting the Census data by this ratio leads to estimates of 95 for Ghana, 5,389 for Nigeria, 602 for Benin/Togo, 0 for Ivory Coast, 34 for Liberia, 365 for Sierra Leone, 142 for Guinea, 0 for Guinea Bissau and 9 for Senegambia. These data are then combined with Koelle's sample to create a sample distribution for all countries. In the end, by combining Koelle's sample and the Sierra Leone Census, a sample of the distribution of emancipated slaves living in Sierra Leone in the mid nineteenth century is created.⁵

2.1.2 Combining the Ethnicity Data and the Shipping Data

I use the ethnicity data in a number of ways.

1. The ethnicity estimates are used to provide an allocation of slaves between Benin and Togo. Because of the small size of these two countries, slaves that were shipped from the ports of the two countries were combined into one region. The ethnicity data are used to divide slaves from this area between the two countries.
2. The ethnicity data are used to estimate the number of slaves taken from landlocked countries that may have had slaves taken from them. The landlocked countries include: Mali, Niger, Chad, Burkina Faso, Central African Republic, Zambia, Zimbabwe, Botswana, Malawi, Uganda, Rwanda, Burundi, Swaziland and Lesotho.
3. The ethnicity data are used to estimate the number of slaves taken from coastal countries on the fringe of the slave trade, that do not have

⁵One bias that may be present in the sample is that slaves from countries close to Sierra Leone may be under represented. This is because it was easier for these slaves to return to their homelands. For the moment, I have not attempted to deal with this bias in the data. It is not clear that correcting for this bias would yield better estimates.

ports located on their coast, but may have had slaves raided from their interior. Only two countries fall into this category: Mauritania and Namibia. The estimated number of slaves from these two countries is small.

4. The ethnicity data are used along with the shipping data in cases where the exports of slaves from the coast of the country is expected to be a biased estimate of the number of slaves taken from that country. For some countries, estimates based on coastal exports alone may lead to estimates that are too large. These countries include: Equatorial Guinea, Gabon, Congo, Angola, Sierra Leone, Liberia and Senegambia. For other countries, estimates based on coastal exports alone may lead to estimates that are too small. These countries include: Zaire and Guinea.
5. The ethnicity data are used to allocate countries between regions when the shipping data only reports a broader region instead of the port of export.

2.2 Calculations: 1450–1521

Data on the location and number slaves exported from Africa during this time period is taken from Elbl (1997). Slaves exports are disaggregated into the following 4 regions: Mauritanian Coast, Upper Guinea, Gulf of Guinea, and West-Central Africa.

Data on the ethnicities of slaves for this period comes from three sources: Valencia, Spain 1482–1516 (2,675 obs), Dominican Republic 1547 (22 obs), Peru 1548–1560 (187 obs), and Mexico 1549 (82 obs).

The distribution from the ethnicity data is as follows: Angola .3%, Benin .07%, Burkina Faso .03%, Ivory Coast .07%, Cameroon .07%, Congo .2%, Guinea 3.1%, Guinea Bissau 4.3%, Mauritania .03%, Mozambique .2%, Nigeria 2.2%, Senegambia 87.4%, Sierra Leone 1.2%, and Zaire .5%.

This distribution is consistent with the qualitative description of the origin of slaves during this time. For example, the numbers suggest that no slaves were exported from the Gold Coast (modern Ghana). At this time this area was a net importer of slaves. The Portuguese would buy slaves from the Niger Delta, ship them to the Mina factory (located in the Gold Coast), where they would be traded for gold (Elbl, 1997, p. 44; Vogt, 1973).

Using the distribution from the ethnicity data, I disaggregate slaves exports from each of the four regions into countries. Slaves from the Mauritanian Coast: Mali 33.3%, Mauritania 33.3%, and Senegambia 33.3%.

Slaves from Upper Guinea: Senegambia 90.9%, Guinea Bissau 4.5%, Guinea 3.2%, Sierra Leone: 1.3%, and Liberia: 0.14%. Slaves from the Gulf of Guinea: Benin 2.2%, Togo 1.9%, Nigeria: 91.7%, Cameroon: 2.8%. Slaves from West-Central Africa: Gabon 0%, Congo 23.7%, Zaire: 47.2%, Angola: 29.1%.

Because the ethnicity data do not provide sufficient information about the slaves taken from the Mauritanian coast, I am forced to assign these slaves to countries using descriptive accounts rather than hard data. In her analysis, Elbl (1997) writes that the slaves sold at Arguim, the trading station on the Mauritanian coast, “came from inter-regional exchange circuits along the desert fringe of the Western Sahel, and represented the fallout of political frictions along the Senegal River and the Upper Niger.” This description suggests that slave exported from the Mauritanian coast were taken from Mali, Mauritania and Senegambia. Because the ethnicity data only lists one individual from Mauritania, and none from Mali, it provides little help in assigning the slaves to these three countries. I assume that slaves were taken from each of the three countries in equal proportions.

2.3 Calculations: 1527–1599

From the shipping data, the total number of slaves exported from each coastal country is (the nationality of the carrier is given in brackets): Liberia 150 (Portugal), Nigeria 153 (Portugal), Sierra Leone and Guinea 1,168 (England), São Thomé 103 (Portugal), West-Central Africa 7,429 (Portugal) and unknown 16,730 (Portugal, except 55 from Spain).

The ethnicity data from this period consists of five samples: Dominican Republic 1547–1591 (22 obs), Peru 1548–1560 (187 obs), Mexico 1549 (82 obs), Peru 1560–1605 (2,773 obs), and Colombia 1589–1607 (18 obs). The distribution from the ethnicity data is: Angola 18.2%, Benin .3%, Burkina Faso .03%, Cameroon .03%, Congo 1.6%, Ghana .1%, Guinea 6.5%, Guinea Bissau 50.2%, Mauritania .03%, Mozambique 1.6%, Nigeria 3.1%, Senegambia 9.5%, Sierra Leone 5.8%, and Zaire 3.1%.

This distribution suggests that the vast majority of slaves taken from Africa during this time period are from the Portuguese controlled areas of Angola and Guinea Bissau. This is consistent with the shipping data, which indicates that the vast majority of slaves were exported by the Portuguese during this time.

The ethnicity data was used in four ways, with calculations/adjustments made in this order.

1. To divide exports listed as originating from “Rio Nunez to Cape Mesurado” between the countries of Sierra Leone and Guinea.
2. To divide the slaves shipped from São Thomé between the countries located in the Bights of Benin and Biafra (20%) and West Central Africa (80%).⁶
3. To estimate the number of slaves taken from interior countries. In the ethnicity data the only interior country represented is Burkina Faso.
4. To divide slaves shipped from “West-Central Africa” between the countries of this area.
5. To estimate the distribution of the slaves classified as “Unknown” in the shipping records.

2.4 Calculations: 1600–1699

From the shipping data, the number of slaves exported from each coastal country is: Angola 1,647, Benin and Togo 66,325, Bight of Benin 23,748, Bight of Biafra 9,159, Ivory Coast 180, Congo 1,589, Cape Verde Islands 536, Congos⁷ 330, Gabon 158, Ghana 65,842, Guinea 11,871, Guinea Bissau 360, Madagascar 7,287, Mozambique 244, Nigeria 32,203, Senegambia 16,251, Senegambia and Guinea Bissau 938, Sierra Leone 2,302, Sierra Leone and Guinea 453, São Thomé 6,344, unknown 115,312, and West-Central Africa 96,868.

The ethnicity data for this time period consists of six samples: Mexico 1600–1699 (402 obs), Peru 1610–1650 (4,788 obs), Dominican Republic 1610–1696 (55 obs), Chile 1615 (140 obs), Colombia 1635–1643 (11 obs), and Guyane 1690 (69 obs). Within the sample, the distribution is: Angola 37.9%, Benin 3.8%, Congo 1.0%, Gabon .02%, Ghana .3%, Guinea 7.7%, Guinea Bissau 31.8%, Mali .1%, Mozambique .3%, Nigeria 4.6%, Senegambia 7.6%, Sierra Leone 2.4%, Togo .2%, South Africa .1%, Zambia .04% and Zaire 2.1%.

Because of the large size of the sample from Peru between 1610 and 1650, this sample tends to dominate the ethnicity results. Because in the second half of the century trade from Guinea Bissau decreased drastically, the proportion of slaves taken from Guinea Bissau may be overstated. The export of slaves from Guinea Bissau went from dominating the trans-Atlantic slave

⁶See the Section 1.1.2 for details.

⁷This refers to the ethnic designation of Congo.

trade in the first half of the century, to becoming almost non-existent in the second half. The sample may be over sampling from the time period when Guinea-Bissau dominated the slave trade. For now, I note the possibility of the bias, but I do not take any measures to correct for it.

The ethnicity data are used to perform the following calculations. The order in which the calculations are listed is the order in which they are performed.

1. I use the ethnicity data to disaggregate the following broad regional origins recorded in the shipping records: Benin/Togo, Bight of Benin, Bight of Biafra, and Senegambia/Guinea Bissau.
2. I then use the ethnicity data to impute the origins of slaves shipped from São Thomé, using the same methodology as for the 1527–1599 period.
3. I then use the ethnicity data to estimate the number of slaves shipped from interior countries. Within the ethnicity sample, the only slaves from the interior are from Mali and Zambia. I assume that slaves from Mali are shipped through Senegambia, Guinea Bissau, and Guinea, and that the slaves shipped from Zambia are shipped through Angola.
4. I use the ethnicity data to distribute the slaves classified as “Unknown” in the shipping records between countries.

The final use of the ethnicity data, which I describe in detail, is to adjust country exports for countries for which the coastal area of the country is not representative of the country. The two countries for which this is a concern is Zaire and Guinea.

Because of the bias in exports from Zaire, the ethnicity data are used to determine a distribution between the countries of West-Central Africa. The estimated distribution from the ethnicity data is: Gabon .045%, Congo 2.42%, Zaire 5.24% and Angola 92.3%. This corresponds very closely to the estimate one gets without any adjustments being made: Gabon 0%, Congo 2.6%, Zaire 5.4% and Angola 92%.

Because of the bias in exports from Guinea, the ethnicity data are used to estimate the distribution between Guinea, Sierra Leone and Liberia. The estimated distribution is: Sierra Leone 24.1%, Guinea 75.9% and Liberia 0%. This corresponds very closely to the estimate one gets if the shipping data only is used as an indicator of the origins of the slaves. If one uses this method the estimated distribution is as follows: Sierra Leone 22.9%, Guinea 77.1% and Liberia 0%.

In both cases, I make the adjustment using the ethnicity data, although doing so makes little difference. As will be seen, in later periods when slaves come from further inland in greater quantities, this bias becomes more important. I make the correction in this period only to be consistent with the methodology followed in the later periods.

2.5 Calculations: 1700–1799

From the shipping data, the number of slaves exported from coastal countries is: Angola 261,266, Benin and Togo 312,217, Bight of Benin 74,657, Bight of Biafra 57,079, Ivory Coast 4,438, Ivory Coast and Ghana 281, Ivory Coast and Liberia 254, Cameroon 29,109, Congo 223,546, Cape Verde Islands 293, Congos 14,269, Congo North 1,737, Gabon 24,644, Ghana 821,463, Guinea 99,082, Guinea Bissau 5,340, Kenya and Tanzania 404, Liberia 139,035, Madagascar 5,476, Mozambique 30,887, Mauritius 1,297, Nigeria 590,946, Senegambia 155,011, Senegambia and Guinea Bissau 31,534, Sierra Leone 54,616, Sierra Leone and Guinea 36,847, Sierra Leone and Liberia 474, São Thomé 16,954, South East Africa 474, Tanzania 4,232, Unknown 1,170,201, and West-Central Africa 476,200, Windward Coast 20,270, and Windward Coast to Bight of Benin 95,278.

The ethnicity data consists of the following 10 samples: Colombia 1716–1725 (59 obs), Dominican Republic 1717–1827 (15 obs), French controlled Louisiana 1719–1769 (6,315 obs), South Carolina 1732–1775 (889 obs), Colombia 1738–1778 (109 obs), Spanish controlled Louisiana 1770–1803 (6,615 obs), Saint Dominique sugar plantations 1771–1791 (5,433 obs), Saint Dominique coffee plantations 1778–1791 (1,293 obs), Guadeloupe 1788 (55 obs), and Cuba 1791–1810 (116 obs).⁸ The estimated distribution is: Angola 9.5%, Benin 15.2%, Burkina Faso 1.2%, Central African Republic .02%, Ivory Coast .5%, Cameroon .3%, Congo 3.9%, Gabon .1%, Ghana 2.6%, Guinea 6.6%, Guinea Bissau 1.5%, Madagascar .01%, Mali 6.5%, Mozambique .8%, Niger .01%, Nigeria 15%, Senegambia 18.1%, Sierra Leone .3%, Chad .01%, Togo 2.0%, Tanzania .08%, Zaire 13.3%, Zimbabwe .01%.

This distribution is consistent with the qualitative evidence. The one exception is the high proportion of exports that come from Senegambia. This may be due to the large proportion of slaves sampled from French colonies, namely Saint Dominique and Louisiana.⁹

⁸Unlike the sample for the period 1600-1699, the sample for this period is evenly drawn from the full century. For this reason, I am not concerned that the sample is not reasonably representative of the slave shipped during the 1700s.

⁹In the future, I may want to divide the ethnicity samples for this period by the

Using the ethnicity data, the following adjustments are made.

1. The ethnicity data are used to disaggregate the following broad regional categories recorded in the shipping records: Benin/Togo, Bight of Benin, Bight of Biafra, Ivory Coast/Ghana, Ivory Coast/Liberia, Congos, Congo North, Kenya/Tanzania, Senegambia/Guinea Bissau, Sierra Leone/Guinea, West Central Africa, Windward Coast, and the Windward Coast to the Bight of Benin.
2. The ethnicity data are then used to help estimate the origins of slaves shipped from São Thomé, with 20% coming from the Bight of Benin and 80% from West Central Africa, and Mauritius, with 60% coming from the coast of South East Africa and 40% from Madagascar.
3. The ethnicity data are used to estimate the number of slaves that were taken from countries in the interior. In the sample, the following interior countries are present: Mali, Burkina Faso, Niger, Chad, Central African Republic, and Zimbabwe. I assume that slaves from Mali are shipped through Senegambia, Guinea Bissau, and Guinea, that slaves from Burkina Faso are shipped through Ghana, Benin and Togo, that slaves from Niger are shipped through Nigeria, that slaves from Chad are shipped through Nigeria and Cameroon, that slaves from Central African Republic are shipped through Cameroon, and that slaves from Zimbabwe are shipped through Mozambique.
4. Slaves classified as from “South East Africa” or “Unknown” in the shipping records are distributed between countries as dictated by the ethnicities from these samples.
5. As before, the ethnicity data are then used to determine a distribution between the countries of West-Central Africa. The distribution from the ethnicity data is: Gabon .3%, Congo 14.5%, Zaire 49.6% and Angola 35.5%. This is different from what one gets if the adjustment is not made. If one uses this method the estimated distribution is as follows: Gabon 1.2%, Congo 14.7%, Zaire 17.5% and Angola 66.6%. As expected, the estimates from the ethnicity data suggest a higher proportion of slaves taken from Zaire, and a lower proportion taken from Angola and Gabon. This is because slaves from Zaire were often shipped from ports located along the coast of Angola, Congo and Gabon. The estimated proportion of slaves from the Congo is the same

nationality of the carrier. For now this has not been done.

under both methods. This suggests that the slaves from Congo that were shipped from Gabon, roughly equal the number of slaves from Zaire that were shipped from the Congo. In general, the necessary adjustments made to the data are as expected.

6. The ethnicity data are also used to estimate the distribution between Guinea, Sierra Leone and Liberia. The distribution in the sample: Sierra Leone 3.4%, Guinea 74.2% and Liberia 22.4%. If one uses the shipping data the distribution is: Sierra Leone 14.4%, Guinea 41.9% and Liberia 43.8%. This suggests that a large number of the slaves from Guinea were shipped through Sierra Leone and Liberia. The shipping data overestimates the number of slaves from Sierra Leone and Liberia and underestimates the number slaves from Guinea. This is exactly as expected, and the correction using the ethnicity data is made to avoid this bias in the data.

2.6 Calculations: 1800–1866

From the shipping data the following export in slaves during this period was calculated: Angola 260,411, Benin and Togo 58,175, Bight of Benin 18,228, Bight of Biafra 9,162, Bight of Benin and Bight of Biafra 3,701, Ivory Coast 448, Ivory Coast and Liberia 974, Cameroon 12,313, Congo 246,740, Cape Verde Islands 3,624, Congos 97,583, Congo North 6,552, Gabon 17,999, Ghana 166,474, Guinea 17,561, Guinea Bissau 8,530, Kenya and Tanzania 282, Liberia 47,042, Madagascar 1,018, Mozambique 232,177, Mauritius 454, Nigeria 252,433, Senegambia 15,786, Senegambia and Guinea Bissau 2,677, Sierra Leone 12,470, Sierra Leone and Guinea 7,933, São Thomé 23,968, South East Africa 1,620, Tanzania 908, Unknown 801,230, and West Central Africa 363,522, Windward Coast 10,577, Windward Coast to Bight of Benin 1,203, and Zaire 2,598.

The ethnicity data consists of the following 20 samples: American Louisiana 1804–1820 (5,389 obs), Salvador, Brazil 1808–1842 (662 obs), Cuba 1811–1840 (2,976 obs), Trinidad 1813 (13,403 obs), Dominican Republic 1815–1827 (3 obs), Saint Lucia 1815 (2,728 obs), Saint Kitts 1817 (2,888 obs), Berbice 1819 (1,141 obs), Salvador, Brazil 1819–1836 (1,095 obs), Salvador, Brazil (freed slaves) 1820–1835 (1,341 obs), Sierra Leone 1821–1824 (605 obs), Rio de Janeiro, Brazil 1826–1837 (1,906 obs), Anguilla 1827 (53 obs), Rio de Janeiro, Brazil (freed slaves) 1830–1852 (4,034 obs), Rio de Janeiro, Brazil (deaths) 1833–1849 (1,735 obs), Salvador, Brazil 1835 (277 obs), Salvador Brazil 1838–1848 (250 obs), Sierra Leone 1840–1850 (6,162

obs), Salvador, Brazil (freed slaves) 1851–1884, Salvador, Brazil 1852–1888 (294 obs), and Kikoneh Island, Sierra Leone 1896–1897 (190 obs). The sample yields the following distribution: Angola 14.2%, Benin 3.3%, Burkina Faso .04%, Central African Republic .02%, Ivory Coast 2.0%, Cameroon 6.8%, Congo 4.5%, Gabon .5%, Ghana 3.9%, Guinea 8.8%, Guinea Bissau .5%, Equatorial Guinea .02%, Liberia 1.5%, Mali .5%, Mozambique 2.5%, Malawi .7%, Namibia .01%, Niger .02%, Nigeria 33.6%, Senegambia 1.4%, Sierra Leone 2.1%, Chad .01%, Togo 2.0%, Tanzania .01%, South Africa .005%, Zambia .09%, and Zaire 11.3%.

Using the ethnicity data, the following adjustments are made.

1. The ethnicity data are used to disaggregate the following broad regional categories recorded in the shipping records: Benin/Togo, Bight of Benin, Bight of Biafra, Ivory Coast/Ghana, Ivory Coast/Liberia, Congos, Congo North, Kenya/Tanzania, Senegambia/Guinea Bissau, Sierra Leone/Guinea, West Central Africa, Windward Coast, and the Windward Coast to the Bight of Benin.
2. The ethnicity data are then used to help estimate the origins of slaves shipped from São Thomé, with 20% coming from the Bight of Benin and 80% from West Central Africa, and Mauritius, with 60% coming from the coast of South East Africa and 40% from Madagascar.
3. The ethnicity data are used to estimate the number of slaves that were taken from interior countries. In the sample, ethnicities from the following interior countries are present: Mali, Burkina Faso, Niger, Chad, Central African Republic, Zambia and Malawi. I assume that slaves from Mali are shipped through Senegambia, Guinea Bissau, and Guinea, that slaves from Burkina Faso are shipped through Ghana, Benin and Togo, that slaves from Niger are shipped through Nigeria, that slaves from Chad are shipped through Nigeria and Cameroon, that slaves from Central African Republic are shipped through Cameroon, that slaves from Zambia are shipped through Tanzania and Mozambique, and that slaves from Malawi are shipped through Mozambique.
4. Slaves classified as being shipped from “South East Africa” or “Unknown” in the shipping records are distributed between countries based on the distribution from the ethnicity data.
5. The ethnicity data are then used to determine a distribution between the countries of West-Central Africa, with the estimated distribution as follows: Equatorial Guinea .08%, Gabon 1.6%, Congo 14.6%, Zaire

36.9% and Angola 46.7%. The distribution from my unadjusted estimates is: Equitorial Guinea .02%, Gabon 2.0%, Congo 28.6%, Zaire 23.4% and Angola 46%. As expected, the distribution from the ethnicity sample suggests a higher proportion of slaves taken from Zaire than my unadjusted estimates. Many slaves from Zaire were shipped from ports located in other countries. Comparing the ethnicity distribution and the distribution from my unadjusted estimates, it appears that the slaves from Zaire were shipped primarily through Congo and a small amount shipped through Equitorial Guinea and Gabon. Overall, the bias in the data and the necessary adjustments are as expected.

6. As well the data are used to estimate the distribution between Guinea, Sierra Leone and Liberia. The distribution from the ethnicity data is: Sierra Leone 17%, Guinea 71% and Liberia 12%. Without any adjustments, my calculated distribution is: Sierra Leone 16.2%, Guinea 49.8% and Liberia 34%. This difference suggests that a large number of the slaves from Guinea were shipped through Liberia and a small number through Sierra Leone. The shipping data slightly overstates the number of slaves from Sierra Leone, more greatly overstates the number of slaves from Liberia, and understates the number slaves from Guinea. This is as expected. I make the correction using the ethnicity data to avoid this bias in the unadjusted estimates.

3 Indian Ocean Slave Trade

Data on the total number of slaves exported to Islamic destinations outside of Africa during the Indian Ocean slave trade are from Austen (1979) for the period before 1769, from Martin and Ryan (1977) for the period from 1770 to 1799, and from Austen (1988) for the period from 1800 to 1899. For the nineteenth century Austen (1988) reorganizes “Kilwa” into “Kilwa and Mozambique” and “Kilwa and Madagascar”. To back out the number of slaves exported from “Kilwa”, I assume an equal split between “Kilwa and Mozambique” and “Kilwa and Madagascar”. Estimates of the number of slaves shipped to the Mascarene islands are taken from Lovejoy, 2000, pp. 62, 156.

Total exports of slaves during the Indian Ocean Slave trade are reported in Table 2.

An estimate of the origins of slaves shipped through Kilwa (from 1700 to 1860) is constructed using the ethnicity data from Sheriff (1988) and

Table 2: Indian Ocean Slave Exports, 1400–1899

Period	Exports to Islamic Areas, exported from:			Total	Exports to Mascarenes
	Kilwa	Mozambique	Madagascar		
1400–1599				200,000	0
1600–1699				100,000	0
1700–1799				145,000	115,000
1800–1899	265,000	13,250	6,250	284,500	95,000
1400–1899				729,500	210,000

Notes: Estimated exports after 1899 are zero.

Harris (1971). Within the sample, the distribution is: Kenya .6%, Mozambique 37.2%, Malawi 2.8%, Tanzania 58% and Zambia 1.4%. For the slaves exported to the Mascarene Islands, I use ethnicity data from slaves in Mauritius taken from Valentine (2000) and Chenney et al. (2003). I use this to estimate the proportion of slaves that were taken from Madagascar and the proportion that were taken from the mainland of Southeast Africa. The distribution of slaves in the samples is: 40% from Madagascar and 60% from mainland Southeast Africa. I further disaggregate the proportion of

Table 3: Slave Ethnicity Data: Indian Ocean Slave Trade

Region	Years	Num. Ethnic.	Num. Obs.	Source
Mauritius	1820–1832	2	9,742	Valentine (2000)
Mauritius	1825–1827	2	501	Chenney et al. (2003)
Zanzibar Slaves	1860–1861	25	1,400	Sheriff (1988)
Muscat, Oman	1884–1888	5	8	Harris (1971)

Notes: 1,400 represents about .2% of all slaves shipped during the Indian Ocean slave trade. However, the figure represents 35% of the total slaves shipped from Kilwa during that time period.

total slave exports from mainland Africa using the ethnicity data from Sheriff (1988) and Harris (1971). For the period from 1700 to 1860, I use the distribution from the sample. For early and later periods, I make minor adjustments to reflect the differences in the slaving environments of the time. For the period prior to 1700, because slaves are taken almost exclusively from the coastal regions, I assume that slaves are taken from coastal countries only. I use the ethnicity data from Sheriff (1988) and Harris (1971) to calculate the distribution of slave exports among the coastal countries. This distribution is: Kenya .64%, Tanzania 60.56% and Mozambique 38.80%. For the years after 1861, I make one adjustment to the distribution of mainland slaves. I adjust the distribution to account for the fact that slaves were taken from Uganda, Burundi and Rwanda during this period.

Twaddle (1988) writes that “slaves were only traded substantially at a comparatively late date when the British crackdown on the slave trade at Zanzibar and the East African coast generally pushed the coastal supply system inland as far as Buganda, and when Baganada chiefs’ demand for guns and cloth led them to overcome earlier predilections for employing slaves in ways other than items of external exchange. The result of the slave trade was clearly an increase in the number of raids against smaller neighbouring states and stateless societies in the interlacustrine area, to such an extent that the first European missionaries in Buganda had great difficulty in deciding how far the horrors of the slave trade were attributable to indigenous slavery, how far direct products of the trade with the East African coast.” (p. 124). He goes on to write that “the slave trade increased violence by stepping up predation both inside and outside Buganda. Outside Buganda, the slave trade stimulated raids for ivory as well as women in order to pay for the increased supplies of cloth and guns desired by Ganda chiefs in order to build up their followings during the 1870s and 1880s.” (p. 127).

Oliver (1963) writes that “from the earliest years of the nineteenth century there developed a regular pattern of intervention in the affairs of the little states on Buganda’s southern border. Kiziba and Koki were the first to come under Ganda influence. Kyamtwaru was next, followed soon by Karagwe and Ihangiro. North-eastwards Busoga was increasingly penetrated, not so much for control of the approach-routes as to exploit its resources in ivory and slaves.” (p. 191).

“In Uganda, Arab or Afro-Arab traders reached the kingdoms of Buganda and Bunyoro in the second half of the nineteenth century. There, among captives taken by either kingdom from the other in raids or warfare, they found large supplies of slaves, and were soon transporting up to an estimated four thousand of them a year to the coast. . . Bunyoro, to the northwest, was

meanwhile conducting an extensive trade in slaves for arms and ammunition with Arab or Afro-Arab dealers.” (Segal, 2001, p. 160).

“Some merchants, notably the Kimaneta, traded north into Suk and Turkana country and as far as Lake Rudolf. From the 1830s to the 1880s Baganda traders under Kabakas (Baganda kings) Suna and Mutesa collected slaves on the eastern shore of Lake Victoria as well as from neighbouring peoples, the Ankole, the Toro, and the Bunyoro.” (Harris, 1971, p. 12).

“Slaves from Uganda appear to have reached the coast at about the mid-nineteenth century, or shortly after. The explorer, Grant, arriving in Unyanyembe in 1861, noted that among the diversity of slaves gathered there awaiting the long trek to the coast were Hima female slaves from Karagwe in Uganda. . . When the first Arabs reached Buganda and Bunyoro in the second half of the century, slaves were abundant, owing to the recent raids and counter-raids of Mtese and Kabarega.” (Beachey, 1976, p. 194). Beachey continues to name Hima, Nyoro and Ganda female slaves as being commonly traded.

The slave trade lasted until about the beginning of the 20th century. By 1894 the slave trade was abolished in Buganda, although “outside that kingdom, however, the slave trade lingered for some years . . . Bunyoro, the kingdom to the immediate northwest of Buganda, continued to be the focus of an extensive slave trade for a number of years after it ended in Uganda. Kabarega, King of Bunyoro, carried on an extensive trade with the Arabs, obtaining from them arms and ammunition in exchange for slaves.” (Beachey, 1976, p. 196).

There is also some evidence of slaves taken from the areas of Rwanda and Burundi. Graham writes that “the larger part of the population of east Africa was subject to the attentions of the slave-trader . . . In general, the slave-hunting area included the country lying between the equator and Delagoa Bay, and extended as far inland as Lake Tanganyika and the Mountains of the Moon; but most of the captives came from the region of Lake Nyasa and west of Lake Victoria.” (Graham, 1967, p. 147). According to Graham (1967) Uganda, Rwanda and Burundi are located in what would have been the primary slave catching zones for the Arabs in the early nineteenth century.

“In Uganda, the Baganda made life miserable for their neighbours; and the Nyoro and Hima of Ankole enslaved Toro women and children. The Tutsi dominated the Hutu in Ruanda; the Masai lorded it over the Kikuyu and Kamba, and the latter, in turn, held the Ndorobo in a kind of serfdom. The Somali enslaved the Galla, and the result was always captives of war and slaves.” (Beachey, 1976, p. 182).

Davidson (1967) writes:

In 1841 a Turkish captain called Selim came as far up the Nile as Gondokoro, only thirty miles north of the modern frontier of Uganda and the Sudan.

It was not long before Gondokoro had become a base for new raiding operations in the far south. In this way the 'Khartumers', as they were afterwards called, struck at the peace and security of a wide region. Many of these peoples, of northern most Uganda and the southernmost area of Sudan, were poorly organised to defend themselves . . . With the coming of the 'Khartumers', fear and misery appeared in the country. Here was another case, in those painful years of the nineteenth century, when weak peoples had to pay a bitter price to those who had guns and stronger organisation . . . The raiders from the north were Muslims.

This plague of violence spread further. In the late 1850s a trader from the Mediterranean island of Malta, a man called Debono, led an expedition into Acholi country, north of Bunyoro. Some fifteen years later another 'Khartumer', Ali Husain, did the same in Lango country. Both expeditions plundered and killed, destroying villages, driving off cattle, enslaving men, women and children. The northern Ugandans tried to defend themselves. When the next raiding expedition came into Lango country, the Lango fought them and drove them out. Yet other raids continued for many years, and took a heavy toll in human lives and property. (pp. 214–215).

More concrete estimates on the number of slaves exported from the area of modern day Uganda are available. "Mackay estimated that 2,000 slaves were exported annually from Uganda, and a similar number from Bunyoro. Slaves acquired in Uganda were taken by the Arabs southwards by land across the Kagera River or by way of Lake Victoria, and thence to Unyanyembe and the coast. Mr Wilson, of the CMS, saw something of this brisk trade in slaves going down Lake Victoria in canoes furnished by Mtesa, as many as 200 slaves at a time. At least 1000 slaves a year were exported from Uganda by this route. That slave raiding was widespread in Uganda was personally confirmed by Bishop Tucker after observing a fifteen-mile-wide stretch of country in Kavirondo devastated by Swahili slavers from the coast. They had co-opted local chiefs into the business by bribing them with trade goods." (Beachey, 1979, pp. 194–195).

Using the numbers provided in the last quote, an estimate of the number of slave taken from the interlacustrine region of East Africa. I assume that the export of slaves from Uganda occurred between 1861 and 1874. The year 1874 is chosen, because it is the last year for which the estimates suggest slaves were exported from Kilwa. Following the evidence, I assume that 4,000 slaves per year were exported (2,000 slaves per year from Uganda and 2,000 slaves per year from Bunyoro). I assume a mortality rate of 50% on the way to the coast. I further assume that 10% of the remaining slaves are exported outside of Africa. Therefore, between 1861 and 1875 I assume that annually 200 slaves are from the Uganda region. I divide these slaves between Rwanda, Burundi and Uganda, based on the relative size of each country: Uganda 160, Rwanda 10, and Burundi 10.

For the years after 1785, I make one adjustment for the estimate of slaves from Madagascar to the Mascarene Islands. This is made because between 1785 and 1820 slaves were raided from the Comoros Islands by the Malagasy to be export to the Mascarene Islands. Therefore, some of the slave exported from 'Madagascar' would have originally come Comoros. These slaves would have been captured, brought to Madagascar and then shipped from their.

The raiding of the Comoro islands is well documented. Gwyn Campbell writes that "from 1785 to 1820 the Betsimisaraka launched periodic slave raids on the Comoro islands, notably Anjouan" (Campbell, 1988, p. 168). Paul Lovejoy (2000) writes that "various Muslim sultanates controlled the Comoro Islands, and these catered to passing ships in the Indian Ocean until the late eighteenth century, when invasion from Madagascar upset their commercial prosperity. The raids were directed from Sakalava, which, together with Betsimisaraka and Imerina, was locked in a power struggle for control of Madagascar . . . Sakalava raided the Comoros, as well as its own frontier on Madagascar, in search of slaves and other booty. The slaves were sold to the French for use in the Mascarenes, and the proceeds were used to buy firearms." (pp. 79–80). Gill Shepherd (1980) writes that "in 1785 . . . the Sakalave of North West Madagascar launched the first of a series of slave-raiding expeditions against the Comoros. Several hundred thirty-man outrigger canoes would set sail every three or four years with the northerly monsoon and would ravage the island for three months, until the onset of the southern monsoon enabled the raiders to make an easy return home. Expeditions were planned by the Sakalave but piloted by local 'Arabs' or Swahilised Malagasy . . . the Sakalave successfully carried off slaves, freemen and cattle, while the burning of villages and crops completed the utter disruption of the Comorian economy . . . generally there was little the islanders could do to escape the Sakalave. They sent messages for help to

the Portuguese, and to the British Governors in Bombay, Cape Town and Mauritius, but had little respite until 1823 when Merina expansion from Madagascar’s central plateau finally paralysed the Sakalave.” (pp. 74–75).

From the last quote an estimate of the number of Comorian born slaves taken from the island can be made. According to the quote the raids lasted for 38 years, with one raid every three or four years. I assume that there were 11 raids (4 in the 1700s and 7 in the 1800s) in total (one every 3.45 years). Several hundred thirty-man canoes would engage in these raids. I assume several hundred to mean 300. I also assume that 4 persons per canoe are taken. I further assume that 3 of every 4 slaves either enters domestic slavery in Madagascar or die during transport, so that only 1 of 4 is exported from Africa and should be included in my data.

Given these assumptions, the total number of captives from Comoros taken during this time is: $11 \times 300 \times 4 \times \frac{1}{4} = 3,300$. Broken down by centuries, the estimate is 1,200 slaves exported in the late 1700s and 2,100 slaves exported in the early 1800s. I estimate the number of slaves taken from Comoros and shipped to the Mascarene Islands in this manner. I also, adjust downward the estimate of slaves shipped from Madagascar to the Mascarene Islands by this amount.

4 Trans-Saharan Slave Trade

The shipping data are from Ralph Austen’s estimated census of slave exports during the trans-Saharan slave trade (Austen, 1992, pp. 219, 227). The data are disaggregated by the region to which slaves were exported: Egypt, Morocco, Algeria, Tunisia, and Libya. The data are summarized in Table 4.

Some data are available on the ethnic identity of slaves shipped during the trans-Saharan slave trade. This is summarized in Table 5. I combine this data with data collected by Ralph Austen on “all significant [documented] observations of both slave trading and the presence of African slaves and/or ex-slaves in receiving Mediterranean areas” (Austen, 1992, p. 214). The collection compiled by Ralph Austen provides information on either ethnicity broadly defined, region of origin, or the caravan route that slaves were shipped on. The exact procedure that I follow is described in detail below.

4.0.1 Calculations: Egyptian Exports

African historians have a reasonably good understanding of the origins of the slaves that were brought to Egypt. The following quotes provide descriptive

Table 4: Trans-Saharan Slave Exports, 1400–1913

Period	Egypt	Libya	Tunisia	Algeria	Morocco	Total
1400–1599	600,000	75,000	0	0	0	675,000
1600–1699	300,000	150,000	0	0	0	450,000
1700–1799	300,000	270,000	80,000	50,000	200,000	900,000
1800–1913	422,500	290,700	45,700	58,500	282,000	1,099,400
1400–1913	1,622,500	785,700	125,700	108,500	482,000	3,124,400

Table 5: Slave Ethnicity Data: Trans-Saharan Slave Trade

Region	Years	Num. Ethnic.	Num. Obs.	Source
Central Sudan	1910–1930	17	392	Spaulding (1988)
Banamda Slaves	1908–1911	7	5095	Klein (1992)
Constantine, Algeria	1845	3	570	Emerit (1949)

evidence of the origins of the slaves exported from Egypt.

“On his [Petherick, British Consul and Ivory trader, who was officially based on Khartoum] first journey to the southern Sudan he had seen the great slave market at El Obeid in Kordofan, where thousands of slaves were sold – ‘They ranged in colour from the black of the southern Sudan to the muddy white of the Egyptian fellah girl’ ” (Beachey, 1976, p. 125).

“The southern Sudan is a vast expanse of land, extending approximately from latitude 4°N to 15°N . . . The Nilotes, the peoples of this southern region to the immediate east of the Upper Nile, between 5°N and 12°N, comprise a cluster of tribes basically negroid with Cushitic influences. Their lack of broad internal cohesion and cephalic authority made them an easy prey for the slavers. To the west of the Upper Nile, ranging across the tributaries of the Bahr el Ghazal and extending south to the Congo-Nile watershed, the Azande and Niam-Niam group of peoples, frequently rent by dynastic rivalries in the nineteenth century, were also easy prey for the slavers. Still

farther south and west across Wele River, the Mangbetu, well known for the beauty of their women, were contacted by slavers from the north in about the middle of the nineteenth century.

Thus this whole vast area, including what later became the Anglo-Egyptian Sudan, and to the south-west of it, well over a million square miles in all, became the slave hunting grounds for the Egyptians (more commonly known as the Turks) and their underlings, throughout most of the nineteenth century.” (Beachey 1976, pp. 124–125).

“The Maltese, Andrea de Bono, and his nephew, Amabile, in partnership with a merchant prince, Sheikh Ahmad al-Aqqad, government recruiting officer at Gondokoro, operated among the Zande people. They owned several large river craft each capable of carrying 500 slaves...De Bono’s trading activities extended as far south as Faloro, in what is now northern Uganda.” (Beachey, 1976, p. 126).

“In 1820 the catchment area for raiding reached to Gallabat on the Ethiopian Frontier. Slave traders extended their reach into Bahr El-Ghazal and farther south into Equatorial Africa. Rabih el-Zubair moved west of Darfur into the slave catchment region south of Wadai, and there raided for slaves relentlessly until 1893. Rabih then proceeded westward, to conquer the kingdom of Bornu. In 1900 he was captured by the French.” (Segal, 2001, pp. 150–151).

“two major Sudanic slave-supplying markets: Bornu (later Kanem), in the region of Lake Chad, and the Hausa states to the west.” (Segal, 2001, p. 131).

“Various *jihads* in West Africa, particularly the one that led to the foundation of the Sokoto Caliphate after 1804, also resulted in the shipment of slaves across the Sahara. Perhaps a half-million or more slaves were involved in this traffic. The Sokoto Caliphate and neighbouring Borno exported between 3,000 and 6,000 slaves per year from 1810 to 1870; in the 1870s, the trade dropped to a level of 1,000 to 2,000 per year while the volume declined further in the 1880s and 1890s. Other slaves were exported northward from Timbuktu, perhaps in the order of 1,000 to 2,000 per year for most of the century. Although trade from Wadai and areas further west was only a small portion of the total export trade of the nineteenth century – in the order of 9 per cent – in fact it represented far more significant developments in West Africa, which resulted in the enslavement of people on a scale comparable to other areas.” (Lovejoy, 2000, p. 155).

These accounts of the origins of the slaves provide a useful benchmark that I compare my figures against. To construct my data, I base the distribution of slaves on the information on slave origins from Austen (1992) and

from the ethnicity data.

In the 1400s the only indication of the ethnicity of slaves are accounts of “black” slaves in Cairo, and an account of 1,800 slaves sized as tax from upper Egypt for Cairo. For the 1400s, I assume that 1/2 of the slaves are from Egypt and 1/2 are from Sudan. In the 1500s and 1600s, the only specific account of the origins of the slaves is of the annual Ethiopian caravan in 1588 and in the late 1600s. It is reported that the annual Sennar Caravan brings in 2,000 to 3,000 slaves annually. For this period I assume that the slaves are from Sudan and Ethiopia in equal proportions.

In the 1700s, the data indicates that 9,500 slaves arrived in on the Dar Fur caravan, while 3,050 slaves arrived in on the Sennar caravan. I assume that the slaves arriving from the Dar Fur caravan are from Sudan, Chad, and Nigeria. For the distribution of slave between the three countries, I use the distribution of slaves from Spaulding (1988): Sudan 77%, Chad 20% and Nigeria 3%. For those arriving in on the Sennar Caravan, I assume the full distribution based on Spaulding (1988): Ethiopia 71%, Sudan 22.4%, Chad 5.9% and Nigeria .8%. In the end, the distribution is as follows. Ethiopia: $.24 \times .71 = .17$; Sudan: $(.24 \times .224) + (.76 \times .77) = .64$; Chad $(.24 \times .059) + (.76 \times .203) = .17$; and Nigeria $(.24 \times .008) + (.76 \times .027) = .02$.

For the 1800s, the data indicate that 23,895 slaves (48%) arrived in on the Dar Fur caravan, 15,500 slaves (31%) arrived in on the Sennar caravan, 10,000 slaves (20%) arrived from Sudan, and 500 slaves arrived from Ethiopia (1%). I disaggregate the slaves arriving on the Dar Fur and Sennar caravan using the same procedure as for the eighteenth century. The calculated distribution is as follows. Ethiopia: $.01 + (.31 \times .71) = .23$, Sudan $.20 + (.31 \times .224) + (.48 \times .77) = .64$, Chad $(.31 \times .059) + (.48 \times .203) = .12$, and Nigeria $(.31 \times .008) + (.48 \times .027) = .02$.

4.1 Calculations: Libyan Exports

From Austen (1992), all reported slave shipments during the 1600s and 1700s are to Tripoli through Fezzān. It is reported that 13% (during the 1600s) and 15% (during the 1700s) of the slaves imported into Tripoli were paid as tribute to Tripoli from Fezzān, while the rest of the slaves were shipped through Fezzān from Borno further south. For this period, I assume the following distribution: Libya 10%, Niger 40% and Nigeria 40%.

In the 1800s approximately half of the slaves were shipped to Benghazi and half to Tripoli. The Benghazi slaves were primarily from Wadai, with the slaves from the area which is now Chad. The slaves shipped into Tripoli were shipped through Fezzān and were from the area that is now Nigeria and

Niger. For the 1800s, I assume the following distribution for slaves shipped to Libya: Niger 25%, Nigeria 25% and Chad 50%.

4.2 Calculations: Tunisian Exports

From Austen (1992) it is clear that the vast majority of slaves were brought in on the Ghadāmis caravans to Tunis (Ghadāmis is located in north-west Libya, very close to the Tunisian border). Caravans from Ghadāmis to Tunis are reported in 1752, 1788, 1789, 1810, 1812, 1814, the 1840s, and 1896. One report indicates that between 1724 and 1725 two annual caravans of slaves were brought in on a Fezzān-Tunis caravan. The Fezzān caravan likely brought slaves from Niger or Nigeria, while the Ghadāmis caravans would have brought slaves from Mali, Niger and Nigeria. I assume a distribution of 1/3 of slaves from each of Mali, Niger and Nigeria.

4.3 Calculations: Algerian Exports

Slave caravans entered via Ghāt, located in Libya, very close to the Algerian border. Lovejoy (2000) writes that “slaves were exported northward from Timbuktu, perhaps in the order of 1,000 to 2,000 per year for most of the [nineteenth] century.” (Lovejoy, 2000, p. 155).

From Austen (1992) the following information on the origins of slaves exported from Algeria is available. From the 1660 to 1830 an annual slave tribute of 45 slaves from Wargla and Tuggart. In the 1820s and in 1844, 500 slaves enter via Tuggart. In 1848, 160 slaves are imported into Tuggart from Ghadāmis and Ghāt. This continued on a small scale until 1922. In 1880, 450 slaves entered Algeria via Wargla.

Ghadāmis and Ghāt are located in Libya, close to the Algerian border. Slaves exported through these towns either came from Timbuktu, Kano or Bornu, located in the modern countries of Mali, Nigeria and Niger. The accounts of slave imports into Algeria also describes 45 Wargla slaves paid as annual tribute from the 1660s to 1830. The estimated total number of slave exported from Algeria during this period is 500. Therefore, I assume that 10% of the slaves were taken from Algeria. I assume that of the remaining 90%, 1/3 were from Mali, Niger and Nigeria respectively. The estimated breakdown is thus: Algeria 10%, Mali 30%, Nigeria 30%, Niger 30%.

4.4 Calculations: Moroccan Exports

The evidence suggests that slaves shipped from Morocco were primarily from Mali, and to some extent Guinea, Burkina Faso (Mossi and Gurma), Benin

(Borgu and Busa), and Nigeria (Bornu, Kano, Katsina and Busa).

Daniel Schroeter writes that “until the end of the nineteenth century, the supply of slaves in Morocco was maintained by the trans-Saharan caravans. . . slaves were imported into Morocco principally by the overland trans-Saharan route. The slave-hunters frequently mentioned in the nineteenth century were Arabs of the caliphate of Hamdullahi (Masina) who conducted raids in the adjoining territory. The West Africans most frequently mentioned as slaves were the Bambara (who were the principal group inhabiting the Middle Niger valley), but reference is also made to the Fulani (Fuulbe), Mande and Mandingo. Slaves were brought from various points in the western Sudan to Timbuktu from where they were sent north to Morocco.” (Schroeter, 1992, p. 187). The Bambara are primarily from present day Mali, the Fulani from Guinea, and the Mande from Guinea.

Sikainga (1998) provides evidence on the sources of slaves for Morocco in the late 17th century. He writes that “. . . a group of people from Tuwat in southern Morocco sought the advice of Ahmad Baba, the Western Sudanic scholar in Fez, on the question of which West African groups could be enslaved. In response, Ahmad Baba wrote a lengthy treatise in which he delineated the regions and the ethnic groups whose people were the legitimate target of enslavement. According to this treatise, captives from Bornu, Kano, Katsina or Songhay should not be taken as slaves since the inhabitants of these regions were long-standing Muslims. However, Ahmad Baba identified several non-Muslim groups in the same region, such as the Mossi, Gurma, Busa, Borgu, etc. These groups were in fact a major source of slaves for the kingdom of Songhay.” (p. 63).

The accounts of the sources of caravans into Morocco from Ralph Austen report the following. From 1521 to 1525, 100,000 local Arab-Berbers were sold to the Portuguese during a local famine. In the following years it is indicated that slaves are brought from Timbuktu: 1,200 slaves in 1598, 900 slaves in 1600, 3,500 slaves in 1789, 4,000 slaves in 1791, 2,000 slaves in 1810, 200 slaves in 1850, 750 slaves in 1864, 3,500 slaves between 1865 and 1870, 500 slaves between 1873 and 1881, and 750 slaves between 1875 and 1888. The reports indicated that in 1697 and 1701, slaves are imported from Guinea. Between 1731 and 1732, a Moroccan military expedition gathers slaves from Senegal. In the early 1830s a Caravan from Tuat to northern Morocco brings 4,000 slaves.

It is clear that the vast majority of slaves were brought from the Timbuktu region. Guided by the data, I assume that 90% of the slaves imported into Morocco are from the area South of Timbuktu, which is now Mali. From the ethnicity data reported in Klein (1992), we know that in the early 20th

century 98.0% of the slaves from this region were from Mali and that 2% are listed as being from “Guinea, Ivory Coast”. Also reported in Klein (1992) is weak evidence based on census data that a significant number of slaves were also from Burkina Faso. This fits with the reports from Sikainga (1998) of Mossi and Gurma slaves in Morocco.

Based on this evidence, I calculate the following distribution. Caravans from Timbuktu: Mali: $.8 \times .98 = .784$; Guinea: $.8 \times .01 = .008$; and Ivory Coast: $.8 \times .01 = .008$. Slaves directly from Senegal: $.1 \times .5 = .05$. Slaves directly from Guinea: $.1 \times .5 = .05$. Slaves from Burkina Faso: $.1 \times .5 = .05$; Benin: $.1 \times .25 = .025$; Nigeria: $.1 \times .25 = .025$. The total from each country is then: Mali 78.4%, Guinea 5.8%, Ivory Coast .8%, Senegambia 5%, Burkina Faso 5%, Benin 2.5%, and Nigeria 2.5%.

I also include the 100,000 Arab-Berber slaves sold to the Portuguese between 1521 and 1525 in my figures. Austen’s census only goes back to 1700 because he feels that the data are too sporadic to provide good enough estimates of annual averages. I include this one piece of data because it is a significant number and because it provides valuable evidence that Berbers were sold into slavery. Not including this would improve the results of the paper. The residual for Morocco indicates that its level of growth is too high compared to its slave exports.

5 Red Sea Slave Trade

Estimates of the total number of slaves exported during the Red Sea slave trade are available from a number of sources. For the period 1800 to 1899 the data are from Austen (1988). For this period a breakdown by port of export is provided. For the period from 1400 to 1799 the data are from Austen (1979). For this period only the aggregate number exported from the four ports is known. In calculating the exports from each country, I use the distribution between ports during the 1800s for the time period before 1800.

The best evidence of the origins of the slaves shipped during the Red Sea slave trade comes from Harris (1971). Harris writes that “the southern and western provinces of Ethiopia were major sources for the Red Sea traffic” and that “the major source of slaves in the heart of the continent was the Bahr el Ghazal, southwest of Ethiopia. . . However, there is no way to ascertain how many of those slaves were obtained farther south – for example, from the Great Lakes region.” (pp. 43–44). Harris also provides estimates of the number of slaves taken from each area. Annual averages are as follows: (1)

Table 6: Red Sea Slave Exports, 1400–1899

Period	Gulf of Aden (N. Somalia)	Massawa (Ethiopia)	N. Danakil (Ethiopia)	Suakin (Sudan)	Total
1400–1599					400,000
1600–1699					200,000
1700–1799					200,000
1800–1899	268,500	110,900	24,000	102,000	505,400
1400–1899					1,305,000

Notes: Data are from Austen, 1988, p. 33 and Austen, 1979, p. 68. Estimated exports after 1899 are zero.

Ethiopia – Gurage (early 1800s) 3,000; Jimma (1870s) 4,000; Bonga (1880s) 8,000; Kaffa (1907) 6,000 to 8,000. (2) Sudan – Bahr el Ghazal (1875–1879) 20,000 to 25,000 (pp. 43–44). These figures do not indicate the number exported, but the figures provide a rough indication of the proportion of slaves taken from each region in Africa.

More concrete data are also provided. Harris reproduces the statements of slaves which appealed to the British authorities in India for their freedom. The slaves interviewed would be classified as being from both the Indian Ocean and Red Sea slave trades. Of the slaves shipped from Red Sea ports, only 5 reported their area of origin. One was from Sudan (and was shipped through Suakin), and 4 were from Ethiopia.

To construct my figures, I assume that slaves shipped from Suakin are from Sudan, and that slaves shipped from Northern Danakil and Massawa are from Ethiopia. The slaves shipped from the Aden coast were primarily from Ethiopia, but also Somalia and Djibouti. Harris writes that “the principal source for the slaves sold in the southern Red Sea ports and along the northern Somali coast was the Gurage region of Ethiopia.” (Harris, 1971, p. 11). However, the people of the areas near the coastal ports that exported slaves were always in danger of being kidnapped and sold into slavery. Harris (1971) writes that “it is likely that the immediate hinterland of the entire eastern coast suffered losses at one time or another, and even inhabitants of coastal cities fell victim to raids, kidnappings, and other means of capture.” (p. 11). He goes on to write that when Arab slave traders were present on

Table 7: The Method of Enslavement in the Central Sudan

Manner of Enslavement	Percentage
War/Jihad/Raiding	76%
Kidnapped	15%
Judicial process	4%
Pawning	4%
Other reasons	1%

Notes: Data are from Lovejoy (1994). The total sample size is 82 slaves taken from Central Sudan between 1805 and 1850.

the coast the local atmosphere was one of fear. Parents and relatives kept close watch over their children, and people would not go out at night for fear of being kidnapped. There were several reports of Arabs raiding African homes (Harris, 1971, p. 12).

I use the following method to estimate the number of slaves taken from these three regions. I use data from Lovejoy (1994), which I have summarized in Table 7, as an estimate of the method of enslavement of slaves exported from the Aden coast. I assume that those captured in wars, raiding and jihads are from Ethiopia (76%), and that those taken by kidnapping, judicial process, pawning or other reasons were from Djibouti, Somalia and Ethiopia, with the number of slaves from each country proportional to the size of the country measured by land area: Djibouti 1.4%, Somalia 38% and Ethiopia 60.6%.

A Ethnicity–Country Concordance

Table 8: Ethnicity–Country Concordance

Ethnicity	Isocode	Weight
Abamah	NGA	1
Abron	CIV	1
Adangme	GHA	1
Adda	NGA	1
Adele	TGO	1
Adja	BEN	0.765
Adja	TGO	0.235

Table 8: Ethnicity – Country Concordance, continued

Ethnicity	Isocode	Weight
Afudu	NGA	1
Agwa	NGA	1
Akan	GHA	1
Akwa	GHA	1
Allada	BEN	1
Ambaca	AGO	1
Ambamba	GAB	1
Ambo	AGO	1
Amboi	NGA	1
Ambuela	AGO	1
Ambundu	AGO	1
Ana	TGO	1
Anang	NGA	1
Anchico	COG	1
Anyang	CMR	1
Apa	NGA	1
Apollonians	CIV	1
Arada	BEN	1
Arara (Arda)	BEN	1
Ashogo	GAB	1
Atam	NGA	1
Atyo	COG	1
Avikam	CIV	1
Azimba	MOZ	1
Bachoko	AGO	1
Bacoy	CIV	1
Bafia	CMR	1
Bafut	CMR	1
Baji	CMR	1
Bagam	CMR	1
Bagba	CMR	1
Bagirmi	TCD	1
Bakoko	CMR	1
Bakongwang	CMR	1
Bakum	CMR	1
Balamba	ZAM	1
Balanta	GNB	1
Bali	CMR	1
Balolo	ZAR	1
Balonda	ZAR	1
Balu	CMR	1
Bamana	MLI	1
Bambara	MLI	1
Bamenya	CMR	1
Bamun	CMR	1
Bamom	CMR	1
Banda	CAF	1
Bandobo	CMR	1
Bangba	ZAR	1
Banggola	CMR	1
Banggot	CMR	1
Banol	GNB	1

Table 8: Ethnicity – Country Concordance, continued

Ethnicity	Isocode	Weight
Bandya	AGO	1
Banyun	GNB	1
Barba	BEN	1
Bargu	BEN	1
Bariba	BEN	1
Barumbi	ZAR	1
Basanga	ZAM	1
Basa	NGA	1
Bassa Kroo	LBR	1
Batu	NGA	1
Bedde	NGA	1
Beja	SDN	1
Bele	NGA	1
Benin	NGA	1
Berbesi	SEN/GMB	1
Berta	ETH	1
Biafada	GNB	1
Biafara	GNB	1
Bibi (French)	NGA	1
Bihe	AGO	1
Biji	NGA	1
Binji	ZAR	1
Bioho	GNB	1
Birom	NGA	1
Bisa	ZAM	1
Bissago	GNB	1
Bleblo	BFA	1
Bobo	BFA	1
Boke	SLE	1
Boko	NGA	1
Bola	GNB	1
Bolewa	NGA	1
Boma (Sakata)	ZAR	1
Bomba	ZAR	1
Bombe	CMR	1
Bonda	CIV	1
Bondo	AGO	1
Bongkeng	CMR	1
Bonny	NGA	1
Booo	ZAR	1
Boritsu	NGA	1
Bornu	NGA	1
Boulala	NGA	1
Bram	GNB	1
Bran	GNB	1
Brinkum	NGA	1
Bruco	NGA	1
Brucano	NGA	1
Bulla	NGA	1
Bulom	SLE	1
Bunu	NGA	1
Bute	CMR	1

Table 8: Ethnicity – Country Concordance, continued

Ethnicity	Isocode	Weight
Cabao	GIN	1
Caluquembe	AGO	1
Cafre	ZAF	1
Camarao	CMR	1
Canga	LBR	1
Caravali	NGA	1
Casanga	GNB	1
Cassange	AGO	1
Cewa	MWI	1
Challa	NGA	1
Chamba	NGA	1
Chamba (Thiamba - French)	BFA	1
Chamba (Spanish - Dom Rep)	BFA	1
Chewa	MWI	1
Chimba (Herero)	NAM	1
Cingolo	AGO	1
Cipeyo	AGO	1
Cipungu	AGO	1
Citata	AGO	1
Civula	AGO	1
Cocoli	GIN	1
Concha	CMR	1
Coromanti	GHA	1
Corri	NGA	1
Cotocoli	BEN	0.17
Cotocoli	TGO	0.83
Cowke	AGO	1
Cuabo	MOZ	1
Dada	CMR	1
Dagari	GHA	1
Dagomba	GHA	1
Dahomey	BEN	1
Daju	TCD	1
Dan	CIV	1
Dian	BFA	1
Dido	NGA	1
Dimba	AGO	1
Diola	SEN/GMB	1
Dondo (1850s)	AGO	1
Duala	CMR	1
Duguri	NGA	1
Edo	NGA	1
Edoid	NGA	1
Efik	NGA	1
Egba	NGA	1
Eketete	AGO	1
Ekonda	ZAR	1
Enenga	GAB	1
Esan	NGA	1
Eshira	GAB	1
Ethiopians	ETH	1
Eton	CMR	1

Table 8: Ethnicity – Country Concordance, continued

Ethnicity	Isocode	Weight
Fanti	GHA	1
Folupo	SEN/GMB	1
Fon	BEN	1
Fula	GIN	1
Fulbe (Foula)	GIN	1
Fulbe (Poulan)	SEN/GMB	1
Fulbe (Poulard)	SEN/GMB	1
Fut	CMR	1
Gabu	GIN	1
Galangue	AGO	1
Gbandi	ZAR	1
Gbari	NGA	1
Ge	BEN	0.385
Ge	TGO	0.615
Gege (Ewe)	BEN	0.385
Gege (Ewe)	TGO	0.615
Gobir	NER	1
Gogo	TZA	1
Gola	LBR	1
Gombe	ZAR	1
Gulla	CAF	1
Gumuz	ETH	1
Gure	NGA	1
Gurma	BFA	1
Gwari	NGA	1
Ham	NGA	1
Hamba	ZAR	1
Hanya	AGO	1
Hausa	NGA	1
Hehe	TZA	1
Holma	CMR	1
Holo	AGO	1
Huambo	AGO	1
Hyban	NGA	1
Ibani	NGA	1
Ibibio	NGA	1
Idah	NGA	1
Igara	NGA	1
Igbira	NGA	1
Igbo	NGA	1
Ijaw	NGA	1
Ijo	NGA	1
Imbangala	AGO	1
Isoko	NGA	1
Jaba	NGA	1
Jallonke	GIN	1
Jarawa	NGA	1
Jelof	SEN/GMB	1
Jelof	SEN/GMB	1
Jukun	NGA	1
Kabre	TGO	1
Kakonda	AGO	1

Table 8: Ethnicity – Country Concordance, continued

Ethnicity	Isocode	Weight
Kalai	GAB	1
Kamana	GHA	1
Kamba (Bakamba)	COG	1
Kamuku	NGA	1
Kanda	GAB	1
Kanem	TCD	1
Kaniok	ZAR	1
Kankan	LBR	0.5
Kankan	CIV	0.5
Kanuri	NGA	1
Kaonde	ZAM	1
Karanga	ZWE	1
Karekare	NGA	1
Kasai	ZAR	1
Kasena	BFA	1
Kasanje	AGO	1
Kassanga	SEN/GMB	1
Katab	NGA	1
Kebbi	NGA	1
Kimbundu	AGO	1
Kina	AGO	1
Kisama	AGO	1
Kissi	GIN	1
Koko	CMR	1
Kokofu	GHA	1
Koma	SDN	1
Kongo	ZAR	0.58
Kongo	AGO	0.22
Kongo	COG	0.2
Konkomba	GHA	1
Kono	SLE	1
Koranko	SLE	1
Koro	NGA	1
Kossi	CMR	1
Kota	GAB	1
Kotokoli	BEN	0.18
Kotokoli	TGO	0.83
Kpelle	GIN	1
Kru	LBR	1
Kuba	ZAR	1
Kumba	NGA	1
Kunyi	COG	1
Kusu	ZAR	1
Kutshu	ZAR	1
Kutu	TZA	1
Kwakwa	CIV	1
Kwese	ZAR	1
Lala	ZAM	1
Lamba (Balamba)	ZAM	1
Landuma	GIN	1
Lende	AGO	1
Libolo	AGO	1

Table 8: Ethnicity – Country Concordance, continued

Ethnicity	Isocode	Weight
Limba	SLE	1
Limba (Bantu)	CMR	1
Logba	TGO	1
Lokko	SLE	1
Lomwe	MOZ	1
Longo	TZA	1
Louba	ZAR	1
Lovale	AGO	1
Lucumi	NGA	1
Luguru	TZA	1
Lumbo	GAB	1
Lunda (North)	ZAR	1
Lundu	CMR	1
Luo	KEN	1
Lupolo	AGO	1
Lusu	NGA	1
Luwa	ZAR	1
Lweno	AGO	1
Maba	TCD	1
Macua	MOZ	1
Makere	ZAR	1
Makoa	MOZ	1
Makonde	TZA	1
Makwa	MOZ	1
Malamba (Malemba)	AGO	1
Malel	ZAR	1
Malimba	CMR	1
Malinke	GIN	1
Mambila	NGA	1
Mandinga	GIN	1
Manga	NER	1
Manga (16th cent dom rep)	AGO	1
Manganja	MWI	1
Mano	LBR	1
Maravi	MWI	1
Marka	BFA	1
Matamba	AGO	1
Matibane	MOZ	1
Matumbe	TZA	1
Mayo	GIN	1
Mayumbe	ZAR	1
Mazaro	MOZ	1
Mbailundu	AGO	1
Mbamba	AGO	1
Mbangala	AGO	1
Mbata (1850s)	ZAR	1
Mbesa	ZAR	1
Mbeti	GAB	0.36
Mbeti	COG	0.64
Mbona	ZAR	1
Mbondondo	AGO	1
Mbui	AGO	1

Table 8: Ethnicity – Country Concordance, continued

Ethnicity	Isocode	Weight
Mbundu	AGO	1
Mbwela	AGO	1
Mende	SLE	1
Mina	BEN	0.385
Mina	TGO	0.615
Mina (Akan)	GHA	1
Mines (French shipping point 18th)	GHA	1
Minianka	MLI	1
Moco	CMR	1
Mondonga	ZAR	1
Moor	SEN/GMB	1
Mossi	BFA	1
Mrima	TZA	1
Munga	NGA	1
Muniyo	NER	1
Musu	NGA	1
Muxicongo	AGO	1
Mwera	TZA	1
Nalu	GNB	1
Nar	SEN/GMB	1
Natandu	ZAR	1
Ndaza	GAB	1
Ndembu	AGO	1
Ndendereko	TZA	1
Ndombe	AGO	1
Ndonde	TZA	1
Ndongo (Kimbundu)	AGO	1
Ndulu	AGO	1
Nen	CMR	1
Ngala	ZAR	1
Nganda	AGO	1
Ngangela	AGO	1
Ngere	LBR	1
Ngindo	TZA	1
Ngodsini	NGA	1
Ngombe	ZAR	1
Ngoten	CMR	1
Nguru	TZA	1
Noion	CIV	1
Nsaw	CMR	1
Nsundi	ZAR	1
Nuba	SDN	1
Nupe	NGA	1
Nyamwezi	TZA	1
Nyanja	MWI	1
Nyasa	TZA	0.5
Nyasa	MOZ	0.5
Nyemba	AGO	1
Nyika	KEN	1
Nzebi	GAB	1
Nzima	CIV	1
Obamba	GAB	1

Table 8: Ethnicity – Country Concordance, continued

Ethnicity	Isocode	Weight
Okande	GAB	1
Okota	GAB	1
Oromo	ETH	1
Orungu	GAB	1
Otangao	CMR	1
Ovakumbi	AGO	1
Ovambo	NAM	1
Ovimbundu	AGO	1
Oyo Yoruba	NGA	1
Pango	ZAR	1
Pangwa	TZA	1
Papelaou	CAF	1
Pol	CMR	1
Pombo	AGO	1
Pomo	COG	0.5
Pomo	CAF	0.5
Popo	BEN	0.385
Popo	TGO	0.615
Pumbo	AGO	1
Quiaba	CIV	1
Quiamba (French)	BFA	1
Quibula	AGO	1
Quicaca	AGO	1
Quilombo	AGO	1
Quingolo	AGO	1
Quioco	AGO	1
Quipungu	AGO	1
Quitata	AGO	1
Rongo	TZA	1
Rufiji	TZA	1
Rungu	GAB	1
Sagara	TZA	1
Sakata	ZAR	1
Sama	AGO	1
Samba	ZAR	1
Sambo	AGO	1
Sambu	AGO	1
Sanga	COG	0.5
Sanga	CAF	0.5
Sango	CAF	1
Sara	TCD	1
Seke	GNQ	1
Sele	AGO	1
Sena	MOZ	1
Senga	ZAM	1
Senufo	CIV	1
Serer	SEN/GMB	1
Shambaa	TZA	1
Shinje	AGO	1
Sherbro	SLE	1
Shogo	GAB	1
Sobo	NGA	1

Table 8: Ethnicity – Country Concordance, continued

Ethnicity	Isocode	Weight
Soko	ZAR	1
Solongo	AGO	1
Somba	BEN	0.5
Somba	TGO	0.5
Songo (1850s)	AGO	1
Sonde	COG	1
Soninke	MLI	1
Sorongo	AGO	1
Soso (French Spelling)	GIN	1
Soso (1850s W.C. Africa)	AGO	1
Su	CMR	1
Suku	ZAR	1
Sukuma	TZA	1
Sumbe	AGO	1
Sundi	COG	1
Susu	GIN	1
Tama	TCD	1
Tamba	AGO	1
Teke	COG	1
Tem	BEN/TGO	1
Tembo	ZAR	1
Temne	SLE	1
Tangale	NGA	1
Terranova	NGA	1
Tetela	ZAR	1
Tikar	CMR	1
Timbou	GIN	1
Tiv	NGA	1
Toma	GIN	1
Tsaye	COG	1
Tuareg	MLI	0.5
Tuareg	NER	0.5
Tucuruy	MRT	1
Tukulor	MRT	1
Tumbuka	MWI	1
Urhobo	NGA	1
Vai	LBR	1
Vili	COG	1
Vivi (in Cuba = Ibibio)	NGA	1
Wangara	GIN	1
Wankyi	GHA	1
Wara	CIV	1
Wasa	GHA	1
Wawa	CMR	1
Whydah	BEN	1
Woloff	SEN/GMB	1
Xhosa	ZAF	1
Yaka	ZAR	1
Yako	NGA	1
Yalunka	SLE	1
Yao (pre 1850s)	MOZ	1
Yoco	COG	1

Table 8: Ethnicity – Country Concordance, continued

Ethnicity	Isocode	Weight
Yola	SEN/GMB	1
Yombe	ZAR	1
Yoruba	NGA	1
Zamfara	NGA	1
Zape	SLE	1
Zinna	NGA	1
Zombo	AGO	1
Zumper	CMR	1

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