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"Trust in God – But Tie Your Camel First." The Economic Organization Of The Trans-Saharan Slave Trade Between The Fourteenth and Nineteenth Centuries

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Abstract

This paper examines the economic organization of the trans-Saharan slave trade between the fourteenth and the nineteenth centuries on those routes that moved slav

more trade was confined to commodities with high value-to-bulk ratios. Trade in such goods was potentially more profitable than local or regional commerce, especially for powerful groups that barred entry to others.[1] This does not, however, imply that long-distance trade was always limited to luxuries: the Saharan salt trade is a prime example of the long-distance trade of an essential commodity across hundreds of kilometres of difficult terrain to the West African savannah.[2] The complementary needs and endowments that characterized this exchange of salt for Sudanese cereals, cloths, and slaves, prompted the nineteenth-century German explorer Heinrich Barth to ponder how deeply ingrained the principles of exchange are in the laws of nature.[3]

Accordingly, mu13.02 0 0 13.02 481.69tsAc2T24 498.26028 Tmichm 161ngly9.0252 therefore provides a valuable case study for game theory and institutional economics. Game theory has equipped microeconomics with new models for analysing interactions between economic actors and is used here to shed new light on a trade that has hitherto been interpreted in cultural or religious terms.

To show that the organization of the slave trade was economically rational, it is necessary to consider it in the context of its institutional environment. Secure markets, a basic assumption of neoclassical economics, were lacking. Consequently, it is examined how economic organization was shaped by, and interacted with, the institutional framework in terms of property rights, transaction costs, and asymmetric information. In a recent compilation of studies in institutional economics Douglass North and his collaborators point out that the field still appears to be 'long on theoretical analysis but short on empirical work.'[5] This paper aims to make an empirical contribution by testing the main tenets of the theory in a specific historical case study.

This discussion covers the fourteenth to the nineteenth century.[6] Due to the scarcity of primary sources, a longer period allows for the inclusion of more diverse perspectives and demonstrates the dynamic of the trade as it adapted its organization and institutions to changing conditions. A briefer time span would generate a static impression of what was in fact a highly versatile commercial network. The starting point of this discussion, the fourteenth century, marks an important shift in trans-Saharan commerce, following the transformation of the West African gold trade and the expansion of the slave trade.[7] The fourteenth century is

[5] L.J. Alston, T. Eggertson, and D.C. North, 'Introduction', in L.J. Alston, T. Eggertson, and D.C. North (ed.), *Empirical Studies in Institutional Change* (Cambridge: Cambridge University Press 1996, p.1.

[6] Unless otherwise indicated, all dates refer to the Gregorian calendar.

[7] The fourteenth-century decline in the trans-Saharan gold trade was caused by the falling demand for and price of gold in Europe as a result of its famines and epidemics.

also significant in that it offers a number of valuable sources that afford direct insights into the trade. The terminus of this discussion, the nineteenth century, is also marked by an external dynamic that transformed the trans-Saharan slave trade. The growing political influence of European powers culminating in direct colonial rule gave weight to abolitionist forces that hindered and displaced the trade in slaves at a time otherwise characterized by its continued expansion, with more Africans enslaved and exported in the nineteenth century than in any preceding one. The tension between these trends ultimately resulted in the trade's demise, but also spawned a great number of sources to reflect on the trade, the slow progress of abolition, and the opportunities for European traders to market their goods through the existing networks.[8]

As suggested above, the slave trade was just one component of a complex network of exchange. This paper focuses specifically on the trade in slaves for three reasons. First, slaves were universally demanded for military, administrative, mercantile, productive, domestic (including sexual), and social (prestige) purposes by societies on all sides of the Sahara as well as within the desert itself. That this demand continued to be met by supplies is evident in the continuous increase in the numbers of slaves exported across the Sahara from the fourteenth to the

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In the mid-fifteenth century, growing population and production in Europe brought about a fall in all prices relative to gold, making the import of and search for gold extremely profitable. The subsequent Portuguese establishment of fortified trading centres on the Gold Coast undermined the caravan trade in gold. See P. Vilar, *A History of Gold and Money, 1450-1920*, trans. J. White (London: Verso 1984, orig. publ. 1969), pp.36f. and ch.5-6.

[8] The statement about the demise of the trans-Saharan slave trade in the late nineteenth century must be somewhat qualified, in that there is evidence of the persistence of slavery in modern-day Mauritania and Sudan. See R. Segal, *Islam's Black Slaves: A History of Africa's Other Black Diaspora* (London: Atlantic Books 2001), ch.12. For an autobiographical account of contemporary enslavement in the Sudan see M. Nazer and D. Lewis, *Slave: My True Story* (New York: Public Affairs 2004).

nineteenth century.[9] For this reason the slave trade lends itself more readily to an examination over a sustained period than the trade in other this study.[12] It is shown that the commercial framework of the trans-Saharan trade in slaves was integrated into ethnic, cultural, and religious systems but for its efficient operation could not rely solely on such social institutions. It was the development and continuous adaptation of economic institutions, especially coalitions based on informal reputation and sanction mechanisms, that accounts for the survival and expansion of the trans-Saharan slave trade throughout the period. These institutions, in turn, were defined by the unique commercial circumstances created by the need to traverse the world's most expansive and arid desert.

1. Institutional Economics and Game-Theoretical Models

Modern economics is based on the premise that scarce resources are most efficiently allocated through voluntary exchange. The neoclassical economic model assumes a discrete market with perfect information, competition, and contracting and free entry, which is in contrast to the historical reality of imperfect markets with asymmetric information, entry barriers, and transaction costs.[13] These conditions give rise to the principal-agent problem in which agents acting on behalf of principals have the opportunity to act in their own interest by neglecting their obligations to the principal. Game theory has demonstrated that this problem characterizes most exchanges more complex than direct barter, and cannot be theoretically resolved using the model of an anonymous market. In the trans-Saharan slave trade this problem was particularly accentuated as the spatial scope and slow communication rendered

[12] *Cf.* I. Shah, *Caravan of Dreams* (London, Melbourne, New York: Quartet Books 1978), p.4.
[13] Here understood as the costs resultant from the search, negotiation, and enforcement of contracts; *cf*. R.H. Coase, 'The Nature of the Firm', *Economica*, new series, 4, 16 (1937), *passim*.

monitoring extremely costly and the high external risks involved meant that outcomes could not be directly linked to the agent's performance.

Table 1: One-Sided Prisoners' Dilemma

	Agent Cooperates	*Agent Holds Up*
Principal Invests	C_P, C_A	L_P, W_A
Principal Doesn't Invest	0, 0	0, 0

Key: $C_P > 0$; $C_A > 0$; $L_P < 0$; $W_A > C_A$.
Source: adapted from A.K. Dixit, *Lawlessness and Economics: Alternative Models of Governance* (Princeton: Princeton University Press, 2004), p.15f.

Table 1 shows that an agent's dominant strategy is to take an opportunistic action (*Hold Up*) to win his best possible payoff (W_A>C_A). In the context of sixteenth-century European companies, Carlo Cipolla writes that the 'merchant to whom others entrusted their savings could easily have disappeared with the capital or cheated in business conducted in far-off markets where none of his associates had any control.'[14] It will be seen that North African merchants

of state law.’[19] While this multidisciplinary research area aims at generating model

> possible without the precondition of a spirit of mutual trust
> and a sense of honesty in business.[22]

The notion of a sense of honesty based on social and personal righteousness implied in the above quotation may have indeed facilitated exchange relations between principals and agents with similar arises. These problems intensify when, as in the trans-Saharan slave trade, the distinction between the two groups is not fixed, with principals at times acting as agents for other principals. It follows that the *n*-person suggests that ‘in the western Sahara and neighbouring Sudanese pre-capitalist-industrial societies, economic function and organization of long-distance trade were for the most part embedded in social organization’.[28] Without altogether discounting the importance of social norms, ties and ethics, it is argued here that the trans-Saharan slave trade relied on the development of a specific set of economic institutions based on individual utility-maximising behaviour and market-orientation that can be analysed with the concepts of institutional economics and game-theoretical models.

The distinction between social and economic institutions is essentially one of degree, and North’s definition of institutions as ‘humanly devised constraints that shape human interaction’ is suited to encompass both.[29] For the purposes of this discussion, institutions are regarded as economic if they primarily serve to facilitate exchange relations and, symmetrically, as social if their primary function is not directly economic. It may be said, of course, that all institutions facilitate economic life by creating order and lowering the cost of coordinating human interaction.[30] The following discussion will show, however, that for analysing the organization of long-distance trade it is useful to distinguish between the general milieu of shared social institutions and those economic institutions superimposed onto this background in order to overcome specific obstac

2. Setting and Sources

'Allah, say the Moslems who worship him, wanted to have one place in the world where he could walk in peace. So he removed from the desert all unnecessary life. The great Sahara is called the Garden of Allah.'[31] To mere humans, the Sahara has rarely invoked the image of a garden: at nearly the size of Europe, it is the world's largest and most arid desert. It stretches from the Atlantic Ocean in the west to Egypt and the Red Sea in the east, from the Mediterranean Sea and the Atlas Mountains in the north to the Niger River valley and Sudan in the south.

The vastness of the Sahara is often compared to that of a sea, which may explain why its southern desert-edge region is referred to as the Sahel, from the Arabic word for coast (ساحل, *sāhil*). It was a transition zone in terms of climate, culture, commerce, and transport. A great number of slaves subjected to the trans-Saharan trade originated from this region. Many more were brought here from further south and assembled at southern caravan termini such as Walata, Timbuktu, or Kano.[32]

The nomadic inhabitants of the desert and Sahel can be divided into four main groups: Moors, Tuareg, Teda, and Arabs.[33] As the present study is not concerned with ethnology, it follows Ann McDougall's paradigm in reducing the diverse 'tribal tapestry' to the concept of 'Saharan societies'.[34] While this approach does not reflect the gradations

[31] C.R. Joy, *Desert Caravans: The Challenge of the Changing Sahara* (London: Chatto & Windus, 1963), p.13.
[32] In the interest of clarity, names of persons and places have been Anglicized using the commonly employed transliterations.
[33] *Cf.* K.S. Vikør., 'The Oasis of Salt: The History of Kawar, a Saharan Centre of Salt Production' (unpublished Ph.D. thesis: University of Bergen, 1979), pp.9-14.
[34] H.T. Norris, *The Arab Conquest of the Western Sahara* (Beirut: Libraire du Liban, 1986), p.1; E.A. McDougall, 'Research in Saharan History', *Journal of African History*, 39, 3 (1998), p.473.

and evolution of tribal identities throughout the period, it allows for an overall consideration of their role in the trans-Saharan slave trade.

Until recent times, human habitation of, and trade across, the Sahara were only possible through what can indeed be described as the desert's gardens: oases. The distribution of these fertile havens determined the patterns of life and traffic. Command over a major oasis was generally tantamount to controlling its trade routes. For caravans, the most critical factor affecting the choice of itinerary was the seasonal availability of water.[35] Oases were advantageous stop-overs for traders in another respect, name13 u.18 13. m4 677.6004 Tm(n)Tj13.02 0 0 Tz networks became peripheral as North and West Africa were integrated into the world economy. This development is evident in the sources available for the study of trans-Saharan trade. While the fourteenth to seventeenth centuries are described by merchants, travellers, and historians of Arabic descent, European explorers, emissaries, and abolitionists dominate the narratives of the two subsequent centuries.

Much of the Sahara’s modern historiography has persisted in this tradition. While there are numerous studies of the Sudan and the ancient empires of Ghana, Mali, and Songhay, there is not yet an encompassing history of the medieval trans-Saharan trade and its relation to the economic development of the large area it affected. This makes it necessary to consult a wide range of related specialist studies.

The limited scholarly attention that the organization of the trans-

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Saharan slave trade was able to mobilize capital and credit on a large scale and maintain an elaborate system of partnerships and coalitions along the desert routes. The fact that there are no surviving records of the (in Anthony Hopkins' phrase) 'merchant princes of the caravan trade' and their partnerships must therefore be attributed to causes other than their lack of commercial sophistication.[41]

With the onset of active European involvement culminating in colonialism, any inclination traders may have had to maintain records were discouraged by anti-slavery edicts and the penalties occasionally imposed by Western powers.[42] Furthermore, in the societies within and south of the Sahara, the written word was scarcely used. This accounts not only for the lack of information on the slave trade's suppliers and middlemen but also for scarcity of accounts by 'the victims of this great human tragedy [who] were silent witnesses to what they experienced and observed.'[43] A notable exception to this is the life history of Griga. Born in the region of Sokoto around 1848, he was captured, traded across the Sahara, sold at Timimoun in the Algerian Sahara, and later freed. In the 1940s he encountered the commander of the French outpost, F. J. G. Mercadier, and revealed in a series of interviews much about his life as a slave. The record of this encounter is clearly influenced by Mercadier's own biases as a colonial officer but is a remarkable account from the perspective of a slave.[44] Another rare and unusual narrative is that of Captain Riley. Commander of a U.S. merchant ship that was wrecked of the West Coast of Africa in 1815, he was captured and sold to Saharan

[41] A.G. Hopkins, *op. cit.*, p.86.
[42] Gordon, *op. cit.*, p.11.
[43] *Ibid.*, p.11
[44] The author would like to express his gratitude to Dr David Gutelius of Stanford University for making available his manuscript translation; F.J.G. Mercadier, 'L'esclave de Timimoun', trans. D.P. Gutelius, J.O. Hunwick, in D.P. Gutelius, J.O. Hunwick (eds.), *Griga: A Life History of a Saharan Slave* (Princeton: Markus Wiener, forthcoming).

slave traders. Riley convinced one of the traders, Sidi Hamet, to convey him across the desert to Morocco to be ransomed to the British consul. Riley amazingly developed a sincere admiration of the slave merchant while describing the dreadful reality of crossing the Sahara as a slave.

The remaining sources used for this study can be classed into two groups. First, there are sources of Arabic or North African origin. Ibn al-Khatīb's fourteenth-century history *The Encompassment* contains an important description of the organization of the trans-Saharan trade by a merchant from Tlemcen whom al-Khatīb met in Granada. Ibn Battūta's *Rihla*,014 -0.00101 Tw 13.02 0 0850-0.o8r874 7053 Tm(m(b's 204404y, istrade by a 1 T and then crossed the desert to the Moroccan coast. He travelled independently under an assumed Muslim identity and described places which other European travellers would not reach for almost another century. James Richardson undertook two major expeditions between 1845 and 1851 at the behest the British Government. His complex journeys were notable achievements, although many of his observations are coloured by his strong anti-slavery sentiments. When Richardson died in 1851, his travel companion Heinrich Barth assumed leadership of the expedition. Barth was an excellent linguist and Adu Boahen considers ‘the detail and scientific accuracy of hism(a)T5147evem.699(cy f)Tj58vc74az49 Tw 13.0

3. Itinerant Slave Traders: Temporary Coalitions

The trans-Saharan slave trade was characterized by the scope of its network, the high entry cost required in capital and knowledge, and the potentially large returns on this capital.[50] This chapter examines the resultant commercial structures and temporary coalitions. These can be divided into three categories: *(a)* the nature of caravans as temporary coalitions of heterogeneous actors; *(b)* the consequences of the constant threat of violence from within the caravan and from external agents; and *(c)* the slave trade's volume and profitability.

(a) Caravan Trade

The caravan trade across the Sahara was of remote antiquity, although the conventional view that chariots regularly crossed the desert as early as 1000 B.C. has been challenged in recent years.[51] It was, however, only with the introduction of the camel in the first centuries B.C., that sustained commercial communication between the Mediterranean world and the Sudan became possible. Camels were only able to survive in the Sahel during the dry season and even then could not venture further south as they were highly susceptible to disease. This combined with the cost of awaiting a sufficient number of slaves to be assembled in places other than the large permanent markets of the southern termini, acted as a disincentive for traders to venture further south to exclude intermediary merchants.

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Within the Sahara, the camel enjoyed a distinct transport cost advantage over donkeys, oxen, and human porterage: it carried a third more freight than a donkey, required fewer drivers, could survive longer without fresh water, and was able to traverse a full sand desert that no other domesticated animal could negotiate.[52] So although camels were about five times more expensive than donkeys, they represented a significant saving in human labour and overall transport costs.[53] This transport advantage resulted in the 'geographical anomaly whereby it was cheaper to transport goods a greater distance by camel than follow a shorter route by donkey or oxen.'[54] It is, thus, not surprising that most of the region's commerce lay in the hands of camel-breeding Saharans who controlled the volume, routes, and seasonality of trade across the desert. Their seasonal transhumance and reliance on trade for basic needs provided the framework for their specialization in providing services for the trans-Saharan commerce.[55]

Caravans were ephemeral commercial entities formed to serve an immediate purpose.[56] These great moving communities reflected Muslim society at large in their socio-economic stratification and organization, with an *amīr* (امير) for leadership and a *qādi* (قاضي) to adjudicate

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[52] J.L.A. Webb, Jr., *Desert Frontier: Ecological and Economic Change along the Western Sahel, 1600–1850* (Madison: University of Wisconsin Press, 1995), p.11.
[53] P.D. Curtin, *Economic Change in Precolonial Africa. Senegambia in the Era of the Slave Trade* (Madison: University of Wisconsin Press, 1975), p.280.

disputes.[57] The travellers elected the *amīr*, whose position depended on his past performance and often that of his forebears.[58] During his forced desert crossing as a slav (including eunuchs), age, ethnicity, and ability. Similarly successful develop into permanent corporate entities comparable to the European slave-trading companies. Anthony Hopkins argues that the trans-Saharan caravan trade had reached its optimum point of organizational efficiency at an early date.[65] Camel transport was slow, risky even on well-established desert routes, and labour-intensive. Furthermore, this part of the enterprise remained under the control of the desert nomads, who were able to maintain a stranglehold over the whole Saharan transport system.[66]

> Over the 11 or so centuries during which [slave] trade flourished in the Sahara it was impossible to make improvements in the technology of camel transport that would have allowed or encouraged merchants to treat this part of their enterprise as a fixed capital investment over which it might be worthwhile to exercise fuller control. Instead, the camels and the land through which they travelled always "belonged" to the Bedouin inhabitants of the Sahara, who made a series of short-term arrangements with merchants for services and protection.[67]

The frequency with which caravans perished of hunger or thirst and the appalling conditions of slaves during the crossing suggest that traders sought to economize on costly provisions because most other expenses were outside their control.

The absence of large corporations was thus not a failure to develop suitable economic institutions, but due to insurmountable exogenous constraints. Moreover, unlike maritime trade, caravan trade suffered from diseconomies of scale. These became apparent during the colonial period, when greater security of routes and markets allowed for smaller caravans with lower overheads and greater flexibility.[68] Prior to this

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[65] A.G. Hopkins, *op. cit.*, p.81.
[66] *Cf.* J.L. Wright, '"Nothing Else But Slaves": Britain and the Central Saharan Slave Trade in the Nineteenth Century' (unpublished Ph.D. thesis: University of London, 1998), p.59.
[67] R.A. Austen, 'The Trans-Saharan Slave Trade', p.28.
[68] A.G. Hopkins, *op. cit.*, p.63.

period, these advantages were outweighed by the economies of scale in protection, as the threat from brigands did not grow in proportion caravan size. The following part examines the role violence and protection played in the organization of the trans-Saharan trade.

(b) Violence and Protection

The principal reason for the formation of caravans in the trans-Saharan trade was defence against the threat of violence by human agents in an environment of political instability. S.D. Goitein uses the *Geniza* documents to emphasize this function. He shows that the threat of violence was so pervasive that caravans were formed not only for the desert crossing but also for shorter journeys in densely populated areas.[69] Caravans were usually well armed and adopted a variety of tactics to discourage attacks. However, Barth observed on various occasions that open attack was not the preferred tactic of desert brigands; rather, they tended to exploit the Islamic precept of hospitality to infiltrate the caravan at resting places and take advantage of tensions within the heterogeneous group. Barth, to his personal cost, witnessed that this strategy 0 13.02 362.63968 3636805785.filtrate the .r9Tm(t, witnessed that this)Tj13.02

later firearms on dangerous routes.[71]

and those who refused tribute payments, often resulting in captives being sold as slaves to the markets in Timbuktu.[76] The demand for tribute was possible as ‘no king or prince can subdue [the nomads] in the desert’, giving them a military monopoly over the vital desert routes.[77] Barth made similar observations for the Tuareg around Ghat and their tribute system of *Gherama*, from which tribes related by blood were exempt and those regarded as commercial rivals had to pay the highest rate.[78] The extra profits some trading enterprises made as a result of such lower protection costs can be described as protection rents.[79]

Barth noted that the competition between tribes often resulted in immense detours for caravans and reduced market efficiency in the region.[80] Game theory serves to analyse th commerce on their routes and unfavourable on others. At the same time, their own route had to remain sufficiently 'dangerous' to justify the exaction of protection payments. On his return from Mali, Ibn Battūta observed the different methods of extortion of the tribes whose territories his caravan crossed on the route from Timbuktu to Sijilmasa. While the *Bardāma* Berbers who had to be hired as guards are described in almost admiring tones, the *Hakkār* (Hoggar) Berbers who stop the caravan and also insist on their share of its goods are plain 'scoundrels'.[81] However, Ibn Battūta did not reflect on the alternative of a *Bardāma* protection monopoly: once a violence-controlling enterprise eliminates all competitors from a territory, it could reduce the cost it incurred in producing and selling protection. As a monopoly it would not have to reduce its extortions in line with falling costs, but could even raise them until it discouraged trade or attracted the entrance of new competitors.[82] Thus, the competition between the *Bardāma* and the *Hakkār* was in the interests of caravan traders, especially when conducted without actual resort to violence which could delay commerce, destroy goods, and raise insurance costs. In this context, the problem of cooperation and resulting Prisoners' Dilemma of the suppliers of violence was desirable from th

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Table 2: Quantitative Assessments of the Trans-Saharan Slave Trade

	Estimate of Trans-Saharan Slave Exports (Mauny 1971)	*Estimate of Trans-Saharan Slave*

model calculation in Table 2 (adapted from Dietrich Rauchenberger's interpretation of Leo Africanus' *History and Description*) constructs a hypothetical balance sheet of the slave trade between Fez and Gao in the sixteenth century.

Table 3: Model Calculation for the Trans-Saharan Slave Trade in the Sixteenth Century

Transaction	*Quantity*	*Commodity*	*Location*	*Cost or Price*	*Total*	*Ratio to Capital*
Capital	1,000	Ducats[a]	Fez	n/a	1,000	
Purchase	100	Horse				

The model calculation supports the notion of super-normal profits proposed by nineteenth-century European observers, who judged that the trade yielded returns of 300 to 500 per cent ‘with the least possible risk or trouble to the merchant’.[92] In a more cautious deliberation, Nachtigal estimated that north of the Sahara, traders received three to four times the purchase price of their slaves *before* cost.[93] The trade cycle took caravans usually around four months, but was possible only once a year for climatic reasons. This meant that a single roundtrip had to cover the fixed costs for the entire year.

It is evident that the trade was lucrative enough to ensure its persistence throughout the centuries despite high risks and often unpredictable costs, particularly as specialization in highly demanded eunuchs or female slaves had the potential to raise profit margins in times of higher external costs. These costs may, in fact, have differed significantly from Rauchenberger’s estimates: while Leo Africanus frequently mentions such costs, he at no point quantifies them. The model also does not account for tribute payments to Saharan tribes or protection costs incorporated in the hiring of camels. There is almost no data for the level of taxes levied, with the exception of Shabeeny who estimates that in Timbuktu in 1787 they were 4 per cent *ad valorem*.[94] Further complications of Rauchenberger’s calculation lie in the price fluctuations of gold and horses relative to slaves, the great variations in the prices of slaves that were often dependent on subjective criteria, and the difficulties in estimating escapes and mortality.[95]

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[92] Harris [1844], as cited in H.J. Fisher, *op. cit.*, p.101. Also see J. Giri, *Histoire économique du Sahel: De empires à la colonisation* (Paris: Éditions Karthala, 1994), pp.102-109.
[93] G. Nachtigal, *op. cit.*, vol. II, p.65.
[94] Shabeeny, *op. cit.*, p.14.
[95] For a tabulation of horse prices relative to slaves in the western Sahel between *c.*1450 and 1906 see J.L.A. Webb, Jr, ‘The Horse and Slave Trade between the Western Sahara and Senegambia’, *Journal of African History*, 34, 2 (1993), pp.236-

This brief consideration of the profitability of the trans-Saharan slave trade prompts the question to whom these profits accrued: *cui bono*? The final part of this discussion addresses this issue in relation to the commercial organization of sedentary slave merchants.

4. Sedentary Slave Merchants: Persistent Coalitions

Leo Africanus' portrayal of the splendour he witnessed in sixteenth-century Timbuktu, at the time the most important southern *entrepôt* for the trans-Saharan trade, contains a striking observation: 'The inhabitants, & especially strangers there residing, are exceedingly rich, insomuch that the king that now [1526] is, married both his daughters unto two rich merchants.'[96] In this passage Leo describes exceptionally wealthy, non-native resident merchants. These men were the manifestation of a thriving trading diaspora. The success of Maghribi merchants in diaspora was testament to the asymmetric relationship between the economies north and south of the Sahara, most clearly reflected in the exchange of Sudanese human capital for Mediterranean manufactured goods.[97] It was also an expression of the superiority of diaspora organization in developing strategies and institutions to resolve a series of problems inherent to pre-industrial long-distance trade. Among these were regular communication, the creation and maintenance of bonds of trust (not least for the provision of credit), and a system of adjudicating business

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239. Even within a single decade accounts vary from ⅔ of a slave to 25 slaves for 'a good horse'.

[96] Leo Africanus, *op. cit.*, vol. III, p.824.

[97] *Cf.* R.A. Austen, *African Economic History*, pp.40f. Austen goes on to argue that 'unlike similar relationships elsewhere in Africa, the development of the Saharan trading system over time resulted in a narrowing rather than widening of the economic gap between its own poles' due to the limitations placed upon Mediterranean penetration of the Sudan and the importance of local and regional trade.

disputes backed by a credible authority structure.[98] This chapter translates the findings on the economic organization of caravans into the broader patterns of commerce that defined the trans-Saharan slave trade. In so doing, it is demonstrated that similar pressures resulted in comparable outcomes: the cooperative behaviour of partnerships and coalitions was necessary to overcome principal-agent problems. This was achieved through *(a)* the institutions of trading diasporas; *(b)* the use of brokers and slave agents; and *(c)* reputation mechanisms that allowed for economic organization, which was characterized not by direct control over production (in this case raiding), but by a degree of horizontal integration using agents to staff a network of branches along trade routes.[103] Shabeeny describes such a business model, in which merchants residing at Timbuktu have agents or correspondents in other countries and, in turn, themselves act as agents.[104]

While distinct from their host communities and dispersed across distant commercial centres, merchants in diaspora maintained their unity through the shared bond of Islam. ‘The practice of pilgrimage to Mecca and the Islamic educational system were the key institutions which prevented isolated communities from being assimilated into non-Muslim states and societies.’[105] Islam promoted literacy and adherence to a shared legal system (شرعة, *shari’a*) essential to the provision of credit. It carried with it a profound commercial legacy of acceptable practice, a system of weights and measures, and recognized arbitration procedures.[106] And while it did not provide a formal pattern for the organization of trade, it did afford certain business models such as proprietary partnerships (شركاتالملك, *sharikāt al-milk*) and contractual partnerships (شركاتالعقد, *sharikāt al-‘aqd*).[107] These were designed to take advantage of economies of scale in commercial services. Moreover, Islam accommodated the Arabic practice of slavery and institutionalized it

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[103] A.G. Hopkins, *op. cit.*, p.61.
[104] Shabeeny, *op. cit.*, p.22.
[105] P.E. Lovejoy, *Caravans of Kola*, p.39.
[106] *Cf.* P.E. Lovejoy, *Transformations in Slavery: A History of Slavery in Africa* (Cambridge: Cambridge University Press, 2nd edn., 2000), p.93.
[107] For partnership models see J.L. Abu-Lughod, *Before European Hegemony: The World System A.D. 1250–1350* (Oxford: Oxford University Press, 1989), pp.218f.; M. Rodinson, *Islam and Capitalism*, trans. B. Pearce (London: Allen Lane, 1974), ch.3.; A.L. Udovitch, *Partnership and Profit in Medieval Islam* (Princeton: Princeton University Press, 1970), ch.2.

as a means of converting perceived heathens.[108] Islamic teaching provided guidelines for the treatment of slaves, manumission, and their assimilation into the master's kinship group; hence young women, who could be integrated most readily, constituted the majority of slaves traded across the Sahara throughout the period.[109]

Markets are, of course, not only locations where goods and services are traded but also a place 'where identities could be negotiated, where moral values could be contested, where ideas could be exchanged.'[110] Caravans across the Sahara carried 'both the message of the Prophet along with Mediterranean and European wares in exchange for gold and slaves.'[111] It is thus not surprising that the earliest converts were nomadic tribes, the most practiced and persistent slave traders.[112] On the southern desert edge, it was the politico-ed.rnd

Muslim community served 'as an exclusive possession of a particular ethnic or commercial group, helping to further its sense of internal solidarity'.[114] Future research by Islamicists may enable economic historians to decide whether these subdivisions were influenced by the desire to raise the efficiency of reputation mechanisms.

(b) Representatives and Brokers

The chief function of the members of a trading diaspora resident in foreign markets was to represent the business interests of their partnerships and to act as brokers for itinerant traders. The *Geniza* documents show that in the twelfth century such agents received between 2 and 7 per cent commission.[115] For the trans-Saharan trade with its lower frequency, higher entry costs, and thinner markets, it is likely that brokerage fees were in excess of these levels. It is known that these representatives were often stakeholders through familial or diaspora relations. In the fourteenth century, Ibn al-Khatīb recorded an account by Abū 'Abd Allāh Muhammad al-Maqqarī of Tlemcen in northwestern Algeria, whose ancestors established a familial partnership with branches in Tlemcen, the Saharan oasis of Sijilmasa, and Walata in the southern Sahel.

> The Sijilmāsī was like the tongue of a balance, indicating to them the extent of rise or fall in the markets and writing to them about the affairs of merchants and countries and so their wealth expanded and their status grew.[116]

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[114] P.D. Curtin, *Cross-Cultural Trade*, p.49. Also see D.P. Gutelius, 'The Path is Easy and the Benefits Large: The Nāsiriyya, Social Networks and Economic Change in Morocco, 1640–1830', *Journal of African History*, 43 (2002), pp.27-49

[115] Goitein, *op. cit.*, pp183-186.

[116] Ibn al-Khatīb, 'Al-Ihāta fī tārīkh Gharnāta [The Encompassment, on the History of Granada]', trans. J.F.P. Hopkins, in N. Levtzion, J.F.P. Hopkins (eds.), *Corpus of early Arabic Sources for West African History* (Cambridge: Cambridge University Press, 1981), p.307.

The competitive advantage of having reliable information at comparatively low cost enjoyed by these dispersed enterprises was of particular significance in the trans-Saharan trade with its far-flung markets. Barth suggests that the major markets were in regular contact and, to an extent, integrated, although the infrequency of caravans allowed for arbitrage profits.[117] The slave trade was particularly exposed to price fluctuations on the supply side, as most slaves were captured during the annual warring season, and sellers had incentives to dispose of their slaves swiftly. Griga recounts how buyers in the slave market of Timimoun would use the cost of feeding slaves, which within the desert was cons

> them to Īwālātan [Walata] with letters from them to their friends there asking them to let houses to them and come four days' journey to meet them with water. Anyone who has no friend in Īwālātan writes to a merchant there known for his benevolent character who then enters into the same relationship with him.[120]

The operators of *funduqs*, in a West African context usually described as landlord-brokers, provided physical security for itinerant traders and mediated between them and local authorities. Curtin describes how resident brokers were able to make credible assurances of the traders' good conduct, as the broker would remain after the caravan had departed.[121] Similarly, the caravan's *amīr* had an incentive to ensure the commercial probity of the moving traders: while the latter might never return to a particular market, specialized caravan leaders were likely to operate on the same route season after season.

Trading diasporas highlight the advantages of shared ethnicity and creed in ensuring the cooperation of its agents. However, history also abounds with instances of rulers deliberately surrounding themselves with foreigners out of distrust of their own people and their ambitions. Muslim potentates in particular, allowed slaves, captured on the Islamic frontiers and purchased at a young age, to rise to positions of great responsibility and influence. Out of this constellation arose the 'ultimate paradox' of slave kings who ruled in Cairo (Mamluks, 1250–1517), Delhi (Slave Dynasty, 1206–1290), and elsewhere.[122] Accordi

The acquisition of a male slave was a great affair, on which a man was congratulated almost as if a son had been born to him. No wonder, for a slave fulfilled tasks similar to those of a son. He managed the affairs of his master, he travelled with him or for him, or he was in charge of his master's business, when the latter himself was out of town.[123]

The *Geniza* documents further reveal tha visible to and interact with outsiders than other slaves, and secondly, because European observers were intrigued by their elevated social status compared to that of slaves used by European companies and expatriates. Plantation slavery was rare in the Islamic world, and the vast majority of slaves in Muslim societies were directed to the service sector – in occupations ranging from domestic help to porters, soldiers, and concubines – rather than production.[127] Slaves employed as agents usually came into their masters' service at a particularly young age and received a methodical education in Islamic norms as well as business practice. Yā while at Ghadames encountered a slave trading ‘as if a regular free merchant’ who told him that he was selling ‘few slaves, and mostly goods’.[130]

Hence, slave agents were not only privileged compared to slaves but also enjoyed, if their master was an important merchant, greater economic opportunities than many free men. Furthermore, the institutionalized practice of manumission meant that they could expect to use the knowledge and contacts they had acquired to trade on their own account. It is, perhaps, not surprising that under such conditions, many slave agents maintained a commercial bond with their former owners, transposing the master-slave relationship into one between patron and client. J.G. Jackson, writing in the early nineteenth century, marvelled at an instance of this in his footnote to Shabeeny’s narrative:

> I have known instances of a slave being liberated after a few years of servitude; and his master’s confidence has been such that he had advanced him money to trade with, and has allowed him to cross the desert to Timbuctoo, waiting for repayment of his money till his return. This is often the

He then used his booty to purchase horses, embarked on slave raids into Gaoga, exchanged his captives for more horses, and at length subdued the kingdom by installing himself as sovereign.

(c) Credit and Finance

Commercial partnerships and coalitions sustained reputation mechanisms through the credible threat of exclusion from future transactions in what was a closely interconnected network with a limited number of *entrepôts*. This economic institution acted in addition to, but independently of, social institutions. While the merchant enjoyed a high social prestige in Islam, it was also acknowledged that his profession required a special type of cooperative behaviour as expressed in a saying attributed to Caliph Umar: 'Trading is the true test of a man where his worth becomes known.'[133] This sentiment was, of course, not unique to Islam: Baudelaire's well-known aphorism that to the merchant even honesty is a financial calculation can be read as a more cynical expression of the same reality.

A central function of the reputation mechanism, in addition to facilitating commercial contracts *per se*, was to provide an institutional framework for credit and finance arrangements without which the long-distance trade in slaves could not have operated. Credit was frequently used between different traders and between traders and suppliers. Leo's account provides a fascinating description of a credit arrangement between trans-Saharan slave traders and the king of Borno in the early sixteenth century. Desiring horses for his cavalry, the king offered fifteen to twenty slaves per horse but only set out to obtain them after taking possession of the horses. His creditors, who had sold him those horses,

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[133] As cited in E.W. Bovill, *The Golden Trade of the Moors* (London: Oxford University Press, 2nd edn., 1968), p.236.

were maintained at his palace at his expense, but had to wait for up to three months before the king returned from his campaigns, conducted presumably with his newly acquired horses. If the merchants were not satisfied with the captured slaves, they might have to wait for up to a year for further campaigns, with consequentially high opportunity costs.

> Yea I my selfe met with sundrie merchants heere, who despairing of the kings paiment, bicause they had trusted him an whole yeere, determined neuer to come thither with horses againe. […] Howbeit this ki

Islamic proscription of usury, and is known as *mudā'af* (مضاعف, literally multiplied).[139] Fisher suggests that traders with a steady supply of slaves were better credit risks and able to obtain loans at lower rates of interest.[140]

As the majority of transactions were conducted on a credit basis, the distinction between the provision of credit for a trader's enterprise and a direct investment in it is ambiguous connections.[143] 'All evidence indicates that the profit earned by […] Sudanic merchants was far below that realized by trans-Saharan traders and it was the latter who controlled the relationship by means of credit advances.'[144] As seen above, the use of trading diasporas meant that interests and allegiances of merchants were with the northern trading houses, and not with local eles, and not wit along these lines. The tribes as well as the traders operated in a competitive environment that prevented permanent monopolies.

Partnerships between sedentary merchants also faced a series of Prisoners' Dilemmas, usually between Maghribi principal

Future research may further elucidate this issue by examining the interplay between private-order institutions and the various formal institutions that impinged on the trade in different places at different times.

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