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► **To cite this version:**

Clement Tisdell, Serge Svizzero. Economic Theory, Phoenician Pre-coinage External Trade, Changes in the Economic Surplus and its Appropriation - An initial Perspective. 2019. hal-02274893

**HAL Id: hal-02274893**

**<https://hal.science/hal-02274893v1>**

Preprint submitted on 30 Aug 2019

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# **ECONOMIC THEORY, APPLICATIONS AND ISSUES**

**Working Paper No. 80**

**Economic Theory, Phoenician Pre-coinage  
External Trade, Changes in the Economic  
Surplus and its Appropriation – An Initial  
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**Clement Tisdell**

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**July 2019**



**THE UNIVERSITY OF QUEENSLAND**

ISSN 1444-8890

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– An Initial Perspective<sup>1</sup>**

**by**

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**Serge Svizzero<sup>3</sup>**

**July 2019**

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<sup>1</sup> The initial draft of a possible contribution to a book to be edited by Dr. Dalia A. Pokutta (Archaeology, Stockholm University) and others focussing on barter exchange and other economic features of ancient economies.

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**Economic Theory, Phoenician Pre-coinage External Trade, Changes in the  
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**ABSTRACT**

Patterns are explored of the evolutionary stages in the management of economic exchange as economic activity grows and becomes more diverse and complex. These patterns are related to the economic development and external trade of Phoenician city-states. In addition, attention is given to how well economic theories explain the evolution of Phoenician external trading, with particular attention being given to the Heckscher-Ohlin theory of international trade. Also explored is the role of ‘new’ (evolving) media of exchange in facilitating interactive trade, especially that of Phoenicia. The possible methods that Phoenician rulers (and some other ancient rulers) adopted to extract a portion of the economic surplus from trade are outlined, and the policy issues they faced are discussed. It is concluded that media of exchange such as gold, silver and other treasures which initially fostered the growth of international trade, subsequently resulted in stifling this growth. This is because these items came to be regarded as a measure of real material wealth and led to policies being adopted by states which were intended to increase each state’s stock of these treasures. The seeds of mercantilism were sown. This system had several negative economic consequences and it actually tended to reduce international trade and decrease the economic prosperity of nations.

**Keywords:** Ancient societies and exchange, economic evolution, media of exchange, Heckscher-Ohlin theory, pre-coinage exchange, Phoenician trading.

**JEL Classifications:** B11, F10, F11, E42, N00, N48.

# **Economic Theory, Phoenician Pre-coinage External Trade, Changes in the Economic Surplus and its Appropriation – An Initial Perspective**

## **1. Introduction**

Determining patterns of the economic development of ancient societies is a difficult task given the lack of information about the economic activity of these societies. This becomes apparent in studying the economic development of Phoenicia, which is the main focus of this paper. In her introduction to a discussion of early Greek and Phoenician trade, Susan Sherratt (2010, p. 138) states:

“Archaeological interpretation – particularly when social or ideological aspects are concerned – is always going to be an art rather than a science, and if we want to bring alive those peculiarly human elements that otherwise elude us, we will always have to resort to a certain amount of imagination and tentative reconstruction.”

This paper begins by providing a general perspective on the development of external trade in ancient times and its economic implications. In doing so, attention is given to the accompanying decentralization of economic activity and changes in the nature of external economic exchange and its expansion (especially Phoenician international trade) as well as the role of proto-currencies in this evolution. Following this general perspective, different scholarly views are then reviewed about the extent to which Phoenician rulers controlled the international trade of their city-states and eventually devolved the management of much of this trade to a separate class of merchants.

The question is then posed of how well do economic theories explain the evolution and characteristics of Phoenician international trade? Particular attention is paid to the Heckscher-Ohlin theory of the determinants of international trade (Heckscher and Ohlin, 1991) because Temin (2006) claims that it explains the evolution in and the attributes of the international trade of Phoenician city-states. We find that the Heckscher-Ohlin theory provides a poor explanation of the development and nature of Phoenician international trade. We identify different

determinants to those which seem to be suggested by this theory to be very important contributors to the nature and success of this trade.

Next attention is given to the facilitators of international trade. These include initial gift-giving as a precursor to trade based on bargaining which involved the exchange of commodities. Some of the problems involved in 'kick-starting' long-distance external trade are raised and some of the methods that could have been used to start this trade are identified. It is noted that the importance of different methods for facilitating exchange have altered with the passage of time. It is claimed that even prior to the introduction of coinage, new media of exchange (such as the use of metal ingots) used for exchange purposes helped to stimulate international trade, provided increased support for its growing diversity, and fostered the expansion of multilateral trade.

The expansion of international trade provided the rulers of trading states with an opportunity to increase their economic wealth. However, extracting the economic surplus from trading involved greater challenges than when rulers relied primarily on extracting domestic agricultural surpluses to provide the basis of their wealth. This was particularly so in the case of trade-dependent Phoenician city-states. They had little domestic surplus of agricultural goods to collect, unlike in Egypt which primarily remained an agrarian economy. Hence, economic models based on the appropriation of the domestic food surplus by the elite (such as those of Tisdell and Svizzero, 2017; Winterhalder and Puleston, 2018) do not capture the Phoenician situation. Methods adopted by Phoenician rulers in order to extract an economic surplus from trading are outlined and analysed. This aspect is followed by a concluding discussion.

## **2. A General Perspective**

As pointed out by Kristiansen and Earle (2015, pp. 239-240), nowhere during the Neolithic and the Copper Age do we find permanently, well organized long-distance trade networks. On the contrary all Bronze age communities were dependent on metals for their social identity, warrior weaponry and their basic subsistence economy. This triggered international flows of metals which must have been connected with reciprocal flows of exports, including various commodities (salt, cattle, amber, fur...) as well as slaves. As economic development occurred in antiquity, the scope for economic specialization and exchange of commodities expanded and the diversity of commodities available for trade grew. These trends were to some extent

interdependent. Increased international (cross border) trading added to the economic wealth of those societies which became important traders and increased their economic surplus especially when such trade became more 'market' oriented and more impersonal.

As economic systems evolved in this way, the ruling elites no longer relied so much on collecting grains and other physical commodities from their subjects in order to appropriate the economic surpluses. Thus as societies came to rely more heavily on long-distance trade for their economic wealth, the collection of and the importance of their domestic agricultural surplus diminished in significance and their gains from international trade became quite important. Consequently, models based on the collection of the agricultural surplus by the ruling elite became less relevant.

Increased international trading possibilities provided both new challenges and opportunities for the ruling elites. The extra wealth created by greater trade meant that:

1. A greater economic surplus was potentially available to add to the coffers of the elites;
2. They had to devise new ways of collecting this surplus and collect it other than in the form of agricultural produce; and
3. They had to give greater attention to the extent to which trade and economic activity should be centralized or decentralized as well as to the manner in which this decentralization should be allowed to occur.

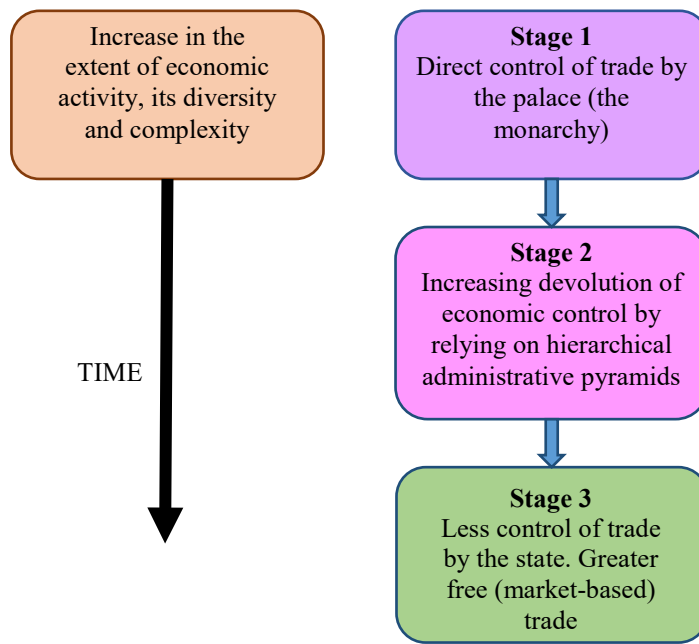
These types of issues are well illustrated by the economic development of Phoenician city-states. As the volume and particularly the diversity of long-distance trade of these city-states increased, indications are that the extent of centralized direction of this trade by its rulers declined. This decentralization (privatization) of trade helped to foster the growth of international trade and added to the wealth of these city-states but possibly reduced the proportion of the economic surplus that the elites were able to extract from their subjects. While the amount of economic surplus collected by the elites may have risen, a considerable increase in the wealth of an oligarchic class of merchants (traders) also occurred. Niemeyer (2006) claims that this shift is quite obvious when comparing the periods before and after the "collapse" which occurred around 1200 BC in southwest Asia and Europe, but this is disputed by other scholars (see later in this paper). According to Niemeyer, before 1200 BC, the Phoenician (Canaanite) elite had considerable control of trade and the associated surplus extraction, while after this, its control declined and the power of merchants increased.<sup>1</sup> This group therefore (due to their growing wealth) were a potential threat to the political supremacy



of the traditional ruling elite. However, Moore and Lewis (2000) contend that the political meddling and ambitions of Phoenician merchants were kept in check by their religious obligations and by the general social ethos of Phoenician societies.

As the amount of economic activity increases and the diversity of economic commodities grows, greater efficiency in the management of economies is usually achieved if they become more decentralized and this decentralization can also stimulate economic growth.

The gains from decentralizing economic activity and the extent to which this decentralization is worthwhile depends on the stage of economic development of economies. For example, economies which are initially completely centrally controlled by palaces (kings) may subsequently adopt decentralized forms of hierarchical administrative systems as their economic development occurs. Market-oriented systems involving less administrative control tend to come later as economies develop. Fig. 1 illustrates a set of different possible stages in the evolution of the management of economic systems. These stages are not, however, necessarily discrete. For example, economic systems are often controlled by a combination of market and administrative mechanisms; the relative importance of which varies. Phoenicia's economic development accords with this pattern to some extent. For example, Tyre's control of its trading colonies partly involved hierarchical administrative structures.



**Fig. 1:** The above diagram shows one possible stylized pattern of evolutionary stages in the management of economic exchange as economic activity grows, becomes more diverse and complex. Particularly in stage 3, exchange is less reliant on gift-giving and social obligation and more impersonal and profit motivated. In stage 3, the development of trade is fostered by intermediate facilitators of trading, e.g. the use of proto-currencies such as gold, silver and copper ingots, and eventually by the use of money and later by more advanced intermediate media of exchange.

As economic development occurred in Phoenicia, some researchers claim that gift-giving and socially determined exchange by its rulers became of reduced relative importance as a means for the international exchanging commodities. These forms of exchange were increasingly replaced by impersonal (socially disembodied) market-like exchange (van Alfen, 2015). There was also a corresponding trend for Phoenician economies to become more decentralized and for Phoenician ruling elites to reduce their central control of international trade. Private merchants had increasing power to manage this trade and to expand it, frequently in cooperative arrangements with the ruling elite. This development contributed to the continuing economic growth of Phoenician city-states and added to their economic sustainability, e.g. by making it easier for them to adjust to changing market opportunities. The gradual shift from the bartering of commodities to the use of proto-currencies (such as gold, silver and copper ingots), as intermediate means of exchange also assisted the expansion of Phoenician international trade.

### 3. To What Extent Did Phoenician Rulers Control Trade?

Phoenician city-states developed a considerable amount of international trade and their economic prosperity and the size of their economic surpluses became highly dependent on it. What was the basis of their economic success? To what extent can it be attributed to the nature of their economic organizations?

Some scholars have attributed the trading success of the Phoenicians to their devolution of the control of trade from rulers to a separate class of merchants or traders. These traders were motivated by their desire in their economic activities to profit from the exchange of commodities. Indeed, Bernholz (1998) largely attributes the economic development of Phoenicia to a high degree of reliance on free trade and presents its development as a historical example of the relevance of “New Economic History” (North and Thomas, 1973; North, 1973), which attributes the rise of the western world to the evolution of free markets and the development of institutions supporting these markets. However, the trade of Phoenician city-states was almost certainly less free (more imperfect) than portrayed by Bernholz.

Although scholars differ about the extent to which Phoenician rulers regulated international trade, most believe that these rulers exercised considerable influence on this trade. Nevertheless, the extent of their control on this trade declined with the passing of time.

Markoe (2005, p.115) contends that the king and the palace in the Phoenician realm “retained the exclusive right to trade directly with foreign powers [prior to the eighth century BC]”. It was only later, beginning in the eighth century BC, that a strong mercantile aristocracy developed as a result of increased trade opportunities afforded by Phoenician overseas expansion. At this time “a diversified market spurred on by Assyrian demand and by expanded colonial activity, encouraged private entrepreneurship on a significant scale” (Markoe, 2005, p. 115).

He further states that during the Late Bronze Age and the Early Iron Age, Phoenician trade was largely controlled by the state and that Phoenician merchants, serving in ports like Ugarit, effectively functioned as representatives of the palace (Markoe, 2005, p. 115).

On the other hand, Bell (2016, p. 93) argues, by analogy with developments in Ugarit and relying on evidence for Ugarit provided by Munroe (2009), that Phoenician merchants had considerable freedom in their international trading even prior to the Late Bronze Age. Maria

Aubet (2001) also contends that the grip of Phoenician kings on international trade was significantly reduced even prior to the eighth century BC. Peter van Alfen (2015, p. 17) states:

“Maria Aubet, among others, have argued that over the course of several centuries from c.1200 to 900 BCE, state directed Phoenician trade began to wane in the face of growing private initiative which in turn gave rise to a ‘commercial aristocracy’ as a distinct socio-economic class. The ensuing ‘merchants’ oligarchy’ in Phoenician cities managed to wrestle trade policy away from the monarchs and so oriented the cities’ governance towards enhancing personal profits. Although such a scenario is plausible, the evidence is rather thin.”

Nevertheless, it seems to be agreed that a merchants’ oligarchy eventually came to have an increasing and significant influence on the trade of Phoenician city-states. Furthermore, it seems to be widely accepted that this influence tended to grow with the passage of time. Therefore, economic decisions about international trade become more decentralized, less regulated and controlled by Phoenician rulers, and more motivated by the seeking of profits. Increased freedom in trading developed.

Moore and Lewis (2000) provided what seems to be a more nuanced view of the relationship between the rulers of Phoenician city-states and their merchant class. They argue (on the basis of evidence from Tyre and Ugarit) that a synergistic relationship existed between the state and its merchants. They also argue that the reasons why the Phoenicians were so successful as traders are similar to those that explain the success of modern day multinational enterprises. In their analysis of Phoenician trading success, they draw on the theories of Dunning (1993) which are intended to explain the economic success of multinational businesses today and to provide reasons for their existence.

Moore and Lewis (2000) claim that a *keiretsu* style relationship (similar to that in contemporary Japan) existed in Ugarit and Tyre between their rulers and their merchant class. This relationship plus the reliance on multinational enterprises as part of their international trading largely explains the success of Phoenician city-states as international traders. As a result of their international trade, the Phoenicians were able to achieve much greater economic prosperity and a larger economic surplus than if they had relied for their economic wealth only on the resources within their own borders, or had been more dependent on these resources than otherwise. Although international trade was undoubtedly the key to Phoenician economic

success, the basis of this success was probably more complex than portrayed by Moore and Lewis (2000) and really needs to be explained by the historical processes (developments) that enabled Phoenicians to prosper and sustain a very diverse and large volume of trade (by ancient standards) for several centuries.

#### **4. How Well do Economic Theories Explain the Evolution and Characteristics of Phoenician International Trade?**

Reliable information on the nature and evolution of Phoenician international trade is very limited and most information has been obtained from secondary sources (van Alfen, 2015; Sherratt, 2010). However, given that the Phoenicians developed such a major international trading network in ancient times and that this was a very important factor in contributing to their economic prosperity, it is worthwhile analysing the development of their international trade taking into account economic theories of the determinants of international trade.

Temin (2006) relies on the Heckscher-Ohlin theory of the determinants of international trade (Heckscher and Ohlin, 1991) to largely explain the composition, and the geographical direction of Phoenician trade. This theory postulates that differences in the resource endowments can be expected to be major determinants of external trade. He quotes Tyre's export of timber from Tyre to Egypt in return for Egyptian wheat as an example of the relevance of this theory and argues that Phoenician involvement in the shipping of bulk cargoes grew in importance as they developed superior ships. However, it seems that the composition and characteristics of Phoenician trade were determined by multiple factors of which differences in their natural resource endowments and those of their trading partners were just one. Moreover, the relative importance of different influences on their external trade altered with the passage of time.

The dynamics of the development of international trade are not captured by the Heckscher-Ohlin theory of international trade. Like most renditions of comparative cost theory of international trade, it is a static theory.

One might expect that in the early stage of their economic development the differences in the natural resource endowments of societies would be significant influences on their trade and exchange (including gift exchange). Nevertheless, even in the early stages of development, skills in adding value to raw materials and primary produce could have also exerted a significant influence on the development of Phoenician external trade. Sometimes such skills

were developed by societies making use of the particular natural resources with which individual societies were better endowed than others, or which were relatively specific to particular communities. For example, the Phoenicians developed skills in textile manufacture by making use of their access to *murex* organisms (marine gastropods) from which purple dye was obtained. They used this source to dye linen, the production of which was based on Egyptian flax.

They also produced and dyed woollen garments relying to a large extent on imported wool. In addition, they developed superior shipbuilding skills and ship designs using their Phoenician timber (e.g. the cedars of Lebanon). This was probably a natural development from relying on marine fishing as an important contribution to the livelihood of many Phoenicians. Their shipbuilding skills in all probability enabled them to develop their skills in building generally. As a result, an agreement was made between Tyre and Israel for temple building in Israel. Tyre supplied builders and timber. In return, Israel entered into co-operative trading agreements with Tyre and supplied wheat and olive oil to Tyre.

Markoe (2005, p. 110) provides more details on the agreement reached between King Solomon of Israel and Hiram of Tyre in relation to the building of the Jerusalem Temple. Hiram agreed to contribute and deliver timber (cedar and fir) from Tyre and to provide the services and expertise of his own men (as well as possibly some sub-contractors from Byblos) to help in the construction of the temple. In return, Solomon agreed to supply Hiram with annual amounts of wheat and oil for a duration of twenty years. This agricultural produce was destined for consumption in Tyre, primarily by the royal household; not for re-export. In addition, Hiram and Solomon agreed to engage in joint trading ventures in the Red Sea.

It is noteworthy that in the exchange agreements between Hiram and Solomon, the supply of services by Tyre to Israel was very important. Apart from the services mentioned above, Tyre supplied artisans for the bronze-work in the Jerusalem temple (Markoe, 2005, p. 31), assisted with the building of the Red Sea merchant fleet in Israel and supplied crew for these ships. Tyre also supplied craftsmen to Egypt in the late Bronze Age to add value to its exports of cedar to Egypt (Markoe, 2005, p. 9). Furthermore, Markoe (2005, p. 5) believes that it is likely that Phoenician engineers and workers helped in the sixth century BC (with the project of Darius I) to build a canal between the lower Nile and the Red Sea to cater for maritime transport. This is quite plausible.

Cunliffe (2017, pp. 225-227) points out that Hiron of Tyre was an energetic builder. For example, he joined several islets together to form one large island for Tyre and engaged in temple building, for instance, built the Melqet temple in Tyre. We can conclude that the Tyrians had significant skills which they used to foster international exchange. These were so important as a contributor to their external trade that it is clear that the Heckscher-Ohlin theory of international trade poorly typifies the nature of their international trade and its development; as it does in the case of Singapore and Hong Kong today.

Markoe (2005, p. 112) observes that an important shift occurred in Tyre's trading activities as time passed. Compared to the situation in the Early Iron Age, Tyre's international exchange became relatively less geared to importing goods for internal consumption and in addition, its own material (natural) resources contributed much less to the composition of its exports. He states that later in the Iron Age, "the commodities that Tyre acquires – precious metals and minerals, dyed and embroidered garments and fabrics, spices, wines, and livestock – are obtained not only for internal use but for redistribution abroad" (Markoe, 2005, p. 112). This supports the thesis put forward in this paper that the Heckscher-Ohlin theory of the determinants of international trade become increasingly irrelevant in explaining the nature of international trading by Phoenician city-states as time elapsed. Phoenician international trade was increasingly decoupled from its material resource base. Similar economic dynamics have been observed in modern times. For example, this has occurred in the case of many higher income countries e.g. major European powers, Japan and even the United States. China is also following a similar path.

The Heckscher-Ohlin theory of international trade (like many renditions of the comparative cost theory of trade) fails to capture the above types of dynamics, because they are all basically static theories. In addition, most applications of these theories do not sufficiently allow for the diversity of resource endowments of a country. For example, the Leontief paradox (Leontief, 1953) which casts doubt on the applicability of the Heckscher-Ohlin hypothesis to US exports, took into account only physical capital and labour as American resource endowments. Land (natural resources) was not considered. Neither was human capital and 'superior' American inventions and technologies. In fact, US exports are quite diverse. Its agricultural and mineral exports are considerable and its 'high-tech' exports are one of the main components of its export income. Advanced technologies are frequently embodied in its exports. While the Phoenician trade did not have the same attributes, the attributes involved overlap to some

extent. Skills and human capital played a major role in the trading success of Phoenician city-states.

As Phoenician city-states developed, the size of their transiting international trade grew but often value was added to commodities as these transited through Phoenicia e.g. gold, silver, ivory and gems were turned into jewellery or ornaments. The manufacture of superior ceramic containers for holding wine and olive oil by Phoenician city-states also enabled them to make use of their skills in this regard to develop their transit trade in these commodities. Presumably also, they had suitable wood resins to seal the wine containers.

The comparative economic advantage of Phoenician city-states in external trade changed and evolved with the passage of time. For example, their comparative advantage in producing superior pottery containers diminished as other societies learnt how to produce similar pots (Master, 2003, p. 59). However, by that time, they had developed other advantages in international trade which enabled them to maintain and even increase their incomes and their economic prosperity.

The pre-eminence of Phoenicians in shipbuilding and design enabled them to establish far-flung maritime trading networks which eventually extended from the east to the western Mediterranean and beyond. Trading colonies were established in Spain (as far away as Huelva) and in between as well, and along the North African coast. Once these were established, it was made more difficult for competitive traders from other states or nascent states to obtain a foothold on the trade involved. To some extent, the Phoenicians established a first-mover trading advantage. Their established trading contacts, trading skills and knowledge provided them with superior ability as traders.

It is, therefore, not surprising that during the periods when Phoenician city-states were under the domination of Egypt and then Assyria, the Phoenicians were left relatively free to manage their own international trade. The reason most likely is that both Egypt and Assyria lacked sufficient skills and adequate networks to manage this trade to their best advantage. This trade assisted Phoenician city-states in paying tribute to the foreign powers and resulted in continuing mutually beneficial trade between Phoenician states and Assyria and Egypt.

One might expect, on the basis of the theory of comparative economic advantage (developed initially by Ricardo, 1817), that as the external trading opportunities of societies expanded they would become more specialized in the production and export of their commodities. As shown



by Earle et al. (2017), such theory seems well tailored to explaining the international trade of Bronze Age Europe. However, it is doubtful if this happened in the case of Phoenician city-states because of the importance of transit trading in their exports. This trade was not tied (except possibly initially) to their own natural or material resources. It depended increasingly on the skills of Phoenicians as traders and/or their ability to value-add to commodities passing through their ports. Their comparative economic advantage in international trade was increasingly man-made and dependent on their own skills, not on their natural or material resources.

A pertinent example of the process of value adding to imported materials is provided by Cunliffe. Cunliffe (2017, p. 232) states “Ivory, one of the commodities regularly traded by Phoenicians was worked as decorative items by their craftsmen for their Assyrian patrons”. Elephant tusks would have been imported for this purpose. Cunliffe (2017, p. 232) provides a photo of the prowess of the Phoenicians as ivory carvers – an ivory carving of a lioness mauling a Nubian boy.

Master (2003, p. 57) states that as the trading networks of Tyron and Sidon expanded in the seventh century BC in the Mediterranean, “Phoenician ports began to transfer commodities that they neither produced nor consumed. Their new commercial economy was wholly reliant on their role as intermediaries between producers and consumers. There was very little to export that was not imported, no home-grown material resources.” As an example of Tyre’s transit trade, he provides the case of the role of Tyre in trading goods from Ashkelon and Ekron. He reports that “Phoenician traders received Ashkelon’s goods and distributed them throughout their networks to the west . . . . . The Phoenicians transported and sold the olive oil of Ekron and the wheat of Ashkelon throughout the entire Mediterranean” (Master, 2003, p. 59).

However, the Phoenicians did not solely act as intermediaries for foreign producers and foreign consumers. They also imported goods for consumption and added value to some imports before re-exporting the value added products.

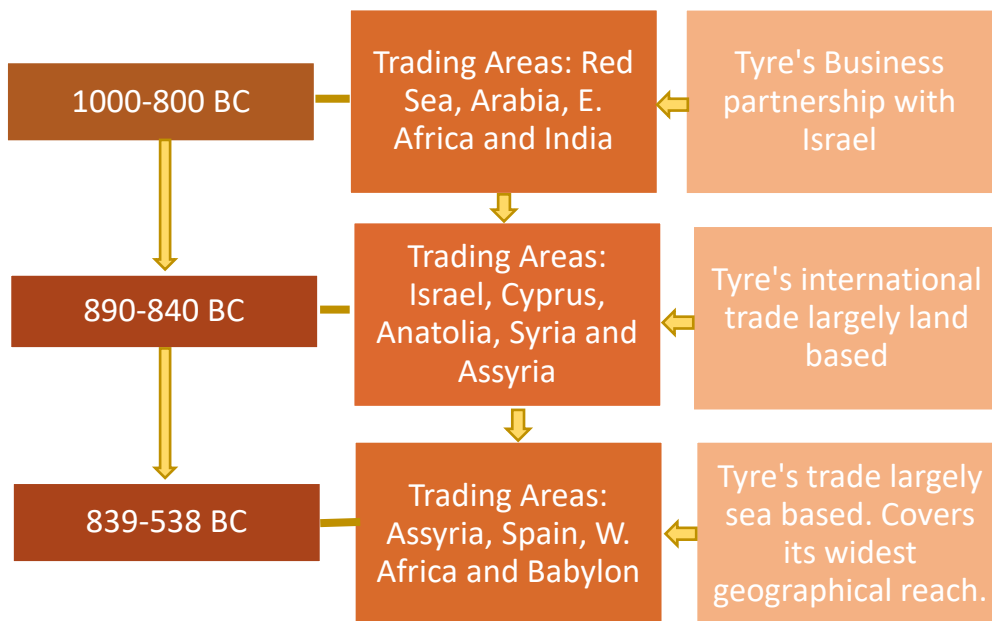
The observations of Master (2003) further add to the evidence that if in the early stage of Phoenicia’s economic development, its supplies of material resources were important in determining the composition of its exports, then they became of little importance as a part of its exports as it developed. Consequently, the Heckscher-Ohlin theory of the determinants of exports and of international trade virtually became irrelevant, contrary to the thesis of Temin

(2006).

Moreover, the view of Temin (2006) that Phoenician ships often carried bulk commodities possibly needs to be qualified. Although some of the items were bulky, most appear to have been of high value in relation to their size, e.g. wines and metals. Moreover, most minerals were processed abroad near to where they were mined in order to reduce bulk. Valuable metals were frequently cast into ingots before being transported.

The economic operation of Phoenician shipping was improved by their ships carrying cargoes both in their outward journeys and return journeys to Phoenicia. In addition, some cargoes would have been downloaded and new cargo loaded on many of the stops made during their sea journey, for example, between their trading colonies. Some of Phoenicia's external trading colonies also added value to commodities which they acquired locally. It must have been a challenging administrative task for Phoenician city-states such as Tyre, to extract economic surpluses from their far away trading colonies.

An interesting aspect of Phoenician trade was the ability of Phoenician traders to alter the geographical direction of their international trade as circumstances changed. Moore and Lewis (2000) have noted this and have provided a table showing the chronological changes in the geographical direction of Tyrian external trade. The extent of this change is illustrated in Figure 2. The Phoenician trading system exhibited considerable flexibility partly facilitated by alterations in its institutional trading structures. Furthermore, historical changes in international political relationships played a significant role in altering the direction of Phoenician trade, as most likely did elements of chance. These factors are not accounted for by economic theories. Phoenicians were adept at responding to such changes.



**Figure 2:** Changes in the geographical direction of Phoenician international trade based on the chronology of Moore and Lewis (2000, p. 21) and their commentary.

However, the rendition of Moore and Lewis, illustrated in Figure 2, covers only a limited time period for which international trade was of importance to Canaan and Phoenicia and focuses only on Tyre. It does not take account of Canaanite trade prior to 1200 BC, for example between Egypt, Ugarit and Mesopotamia. Furthermore, it does not take into account differences in the long-term trading success of different Phoenician city-states. For example, prior to 1000 BC, Byblos was, it seems a more important external trader than was Tyre but later, the opposite occurred. Moreover, the composition of the international trade of different Phoenician city-states varied to some extent.

Moore and Lewis (2000) argue that Dunning's theory of the involvement of multinational enterprises in international trade combined with co-operation between private trading groups and the state, is important for understanding why the Phoenicians were so successful as international traders.

Just how important Dunning's theories are in explaining the nature of Phoenician trading networks is unclear. While it is true that the Phoenicians developed multinational enterprises, we need to learn more about why they did this and why there was co-operation between the state and their private multinational trading enterprises. The reasons probably included the following.

1. Multinational activities relying on colonies were essential for the relatively efficient management of Phoenicia's long-distance trade. This trade could not be efficiently managed from Phoenicia. Its management needed to be decentralized because of knowledge constraints of various kinds. Asymmetry in trading and other information existed between Phoenician centres and their outlying colonies and this disparity must have increased as the distance between these colonies and these centres increased.
2. The state hoped to profit by facilitating multinational trade by means of joint ventures and contributing to the capital involved in establishing trading colonies. The returns may not have been immediate. The colonies also required protection by the Phoenician city-states. The colonies once established paid taxes to Phoenician city-states.

Eventually, some of the Phoenician colonies became self-sufficient and were able to set themselves up as independent states, e.g. Carthage, or as semi-independent entities.

## **5. Evolving Complexity of International Exchange Networks and Facilitating Media of Exchange – The Phoenician Example**

As early economic development occurred, more and more commodities started to be transported for trade or exchange and long-distance trading became more common. Different mechanisms must have facilitated the beginning of long-distance trade in goods in ancient times. It is not possible to explore all these mechanisms here. However, in some cases, initial gift-giving would have been essential for establishing long-distance trade. For simplicity consider the following case.

Three tribal groups (A, B and C) exist in separate territories. A and C have no contact but both have territory adjacent to B's. A and C have different goods that all tribes would like to have. However, B has no goods that A and C want. How can trade be established between A and C? One possibility is that A provides a gift of a wanted good to B who gives a portion of it to C. C then reciprocates with a gift of its wanted good to B who gives a portion of it to A. Consequently, B acts as an intermediary. Initial gift-giving could then develop into exchange of the wanted goods based on the self-interest of the parties involved. Although some variations in the possible chain of events which helps to establish long-distance trading in the above types of circumstances, gift-giving is necessary as part of the sequence of events that brings about long-distance trade in the type of circumstance mentioned.

The above pattern assumes that traded goods are passed from one tribe to the next. However,

in some cases specialized traders could transport the goods. For example, traders from A or C may pass through the territory of B carrying the traded goods they would pay a fee to tribe B for their permitted passage. However, in the case of travel by sea, the territory of B might be avoided and no toll paid to B for using its territory to transport traded goods. The maritime trade of the Phoenicians possibly helped to reduce their trading transaction costs compared to land-based trade.<sup>2</sup>

Voluntary gift-giving in the ancient world was probably rarely an act of pure philanthropy. Gifts were often given in the expectation of desired reciprocation of some kind. For example, Cunliffe (2017, p. 229), describes an act of gift-giving by the king of Sidon and points out that “valuable gifts of this kind were very much ‘introductory offers’ designed to establish relationships between two parties. Once gifts were exchanged, more routine trading could follow”.

Although van Alfen (2015) stresses the importance of studying the evolution of trading networks, he does not analyse their development. However, he states that:

“Gift-giving, barter and monetized market exchange all were used in Phoenician trade as voluntary mechanisms of exchange. The operation, interaction and primacy of these mechanisms is less than clear, however. While some have argued for an evolutionary development – from barter and gift-giving to markets – it is equally possible that all mechanisms were in use at the same time, if not in the same place, and from an early date.” (van Alfen, 2015, p. 8).

Despite this statement by van Alfen, it is clear that monetized market exchange was a later development than gift-giving. Furthermore, direct bargaining over goods to be exchanged (as well as monetized exchange) increased in frequency as time elapsed. This is borne out by the Phoenician example. The Phoenicians were late (for instance, compared to the Greeks) in using money as a medium of exchange. Markoe (2005, p. 22) states:

“The Phoenicians were late in adopting the practice of minting coins. The first mainland issues appeared around 450 BC – more than 140 years after coinage first circulated in western Asia Minor. The reason for the delay is easily understood: with an economy based upon a long tradition of fixed exchange involving raw goods and metals, there was no practical incentive to coin.”

However, it is likely that some Phoenician states made some use of foreign coins for exchange before minting their own coins.

Markoe (2005, pp. 122-125) outlines reasons why most Phoenician city-states eventually began to mint their own coins and made greater use of coins for international trade. These include changes in the geographical direction of Phoenician trade as well as the fact that minted coins could be used to reinforce national identity. As trade increased with areas already using coins as a medium of exchange, the Phoenicians found that trade was facilitated with those areas if they had their own coins to exchange.

Prior to the use of coins as a medium of exchange, several different media were used. It seems likely that the earliest media were increasingly replaced by metal ingots such as those of gold, copper, silver, lead and tin. Of these, it also appears that gold, silver and copper came to be the preferred media of exchange. These media were durable, portable, of reasonably high value relative to weight, held their value well and had attributes which made them particularly attractive as media of exchange. It is possible that ox-hides were one of the earliest media of exchange in the eastern Mediterranean region. Markoe (2005, p. 11) mentions that copper ingots in the form of ox-hides were produced in Cyprus in the thirteenth century BC. Cunliffe (2017, p. 202) suggests that they may have been cast in this form for easier handling, but their shape could also be reflective of the prior use of ox-hides as an important medium of exchange. In any case, we know that there was a transition from bullion as a major medium of exchange to the use of coinage based on metals.

Demps and Winterhalder (2019) point out that several different commodities could have functioned as money or methods of exchange in ancient times. They state: “Commodities that are promising as early money would feature easy quantification, high value, uniform and readily observable quality, durability, portability and divisibility”. They give several examples but most appear to lack all the desirable attributes mentioned. They do not mention amber which was circulated widely in the Bronze Age in Europe. They do point out that commodity monies increased “the ability to complete indirect exchanges, should a coincidence of needs fail to materialize (Melitz, 1974)”.

The use of metals (as ingots and in other forms) was especially valuable in promoting the indirect exchange of the Phoenicians. The evolution of the use of metal ingots, and then coins as media of exchange facilitated the growth of multilateral trade and helped to cater for a greater

diversity of traded goods.

Markoe (2005, p. 109) contends:

“Prior to the adoption of money in the fifth century BC, Phoenician commerce with the outside world was governed largely by financial pacts or trade agreements that established fixed terms of exchange. Such treaties, which established equivalencies in raw materials, were especially needed in trade with large complex economies like those of Egypt, Babylonia or Cyprus”.

However, the meaning of a fixed rate of exchange is not clear in this context. Possibly, it is an agreed rate of exchange. Furthermore, it is likely that these rates of exchange altered periodically as supply and demand conditions changed. The agreed rate of exchange could be expected to alter with different individual agreements.

The example which Markoe (2005, p. 109) gives of an agreement between the royal household of Byblos to supply cedar wood to Egypt is based on agreed (pre-determined) rates of exchange which were established presumably by some bargaining. Later agreements would in all probability result in different terms of trade. Byblos only exported a single item (cedar wood in this case) in return for the import of several different types of items from Egypt. Therefore, less difficulty would be involved in ‘reaching’ an agreement than if many goods were to be exchanged between both the parties. The evolution of new media for international exchange made it easier to engage in external trade as the diversity of international trade increased.

## **6. The Extraction of Trade-related Surpluses by Phoenician Rulers**

Increased trade provided new opportunities and challenges for Phoenician rulers as far as their extraction of the economic surplus is concerned. International trade increased the economic surplus of trading states. However, rulers had to devise new ways to extract the economic surplus generated by this trading. They also had to weigh up the risks and benefits of encouraging greater international trade as a result of allowing private traders or trading groups to be involved in it.

It seems, at least during the time of Hiram of Tyre and Solomon of Israel, that international trade was monopolized by the kings who controlled it in a relatively direct manner. In fact, Markoe (2005, p. 115) contends that Phoenician Kings monopolized the external trade of their

city-states prior to the 8<sup>th</sup> century. Subsequently, joint ventures between private merchants and the leaders became of greater importance. It is likely that subsequently, private traders obtained increased freedom to conduct external trade on their own in the exchange of a widening range of commodities. Nevertheless, it is reported that the rulers of Tyre continued to monopolize the exports of timber, the imports of wheat and local shipbuilding. Therefore, they could obtain monopoly profits from exports of timber and from the sale to their own merchants or others of ships built in Tyre. Their monopoly on wheat imports was possibly maintained in order to ensure that their population had sufficient food, and also as a means to ensure that the population remained obligated to the royal house for its subsistence.

It is known that the Phoenician rulers imposed levies or tariffs on commodities at their ports and borders. They may also have granted trading rights to merchant traders for a payment of a fee. Collecting the economic surplus from their distant trading colonies must have been quite challenging. Some of the distant colonies were taxed after they became established. Duties could also be collected on trade between colonies or on goods dropped off by ships at stops on their way back to Phoenicia or on outward journeys. Potentially, a combination of export and import duties could have been used by royal Phoenician households to fill their coffers or to provide them with their wanted goods. These were most likely collected by government appointed officials. However, the possibility also exists that tax-collectors paid fees to royal households to act as tax collectors.

Markoe (2005, pp. 121-122) cites evidence that Phoenician mainland capital (for example, Tyre and Sidon) imposed annual taxation on their own dependencies. He points out that: "evidence for state assessment of annual imposts may be found, beginning with the fourth century BC on a series of seals and *bullae* attesting to such fiscal imposition and, on occasion, tax exemption". Apart from anything else, Phoenician rulers were under varying degrees of pressure in the Iron Age to obtain and then supply tributary goods to the rulers of Assyria, Babylon and Persia.

The form in which the trading surplus was collected by Phoenician royal households most likely altered with the passage of time. Increasingly the trading economic surplus appears to have been collected in the form of treasures, such as gold, silver and copper ingots and items made from these. The stock of these treasures held by the elite came to be regarded as a measure of the economic wealth of a nation. Subsequently, mercantilist economic theories were developed (for example, by Kautilya, (1961 [4th century BC]) and by Mun (1928 [1664]) to support the view that such items constituted economic wealth. Mercantilists also proposed state



policies which in their view would enable the crown to amass an increased amount of treasures. In 1776, Adam Smith pointed out that such measures could in fact reduce the economic wealth of nations.

No doubt an important challenge faced by Phoenician rulers was to ensure that their imposts on external trade were not so high that these significantly restricted this trade. If these were set too high, this would reduce the surplus collected by rulers by causing a significant reduction in their external trade. In addition, it could result in less economic prosperity than otherwise. Unfortunately, we do not have the archaeological data to inform us how Phoenician rulers coped with this challenge. Nevertheless, it is clear from Winterhalder and Puleston (2018) that there was awareness of these types of issues in ancient times.

## **7. Concluding Discussion**

Although there are many gaps in our knowledge about the management of the external trade of Phoenician city-states, virtually no information exists on trading within these city-states. Furthermore, it is not known if the ruling elite extracted any economic surplus from internal trade. However, it is known that the Aztecs established market-places within their cities and that the rulers charged a fee for the use of spaces within those places. Trading outside these market places was forbidden. These markets primarily traded local goods. Hodge (1994, p. 64) states:

“In all [local] markets, products were bartered for other goods or for any of a range of relatively non-perishable goods that were valued in themselves as a form of wealth. These included cotton cloth, cacao beans, quills filled with gold dust, copper bells and axes and beads of shell and various green stones.”

These latter items acted both as a store of value and as media of exchange. She also points out that long-distance trading was regulated by Aztec rulers. Only particular persons or groups of persons (guilds) were permitted to engage in it (Hodge, 1994, p. 64). One of the important functions of these traders was to import luxury goods which rulers gave as gifts to foster loyalty and social obligations (Hodge, 1994).

Different ancient societies evolved different sets of media of exchange but these sets often overlapped to some extent. Moreover, these sets have continued to evolve in more recent times.

In this respect, consider the evolution of modern ‘paperless’ currency used for exchange (based primarily on ‘accounting’ entries) as well as new methods of exchange made possible by the advent of the internet.

It should also be observed that the development of international trade in Asia Minor and the Mediterranean seems to have sown the seeds of the economic doctrine of mercantilism. Rulers started to account for their wealth in terms of the value and quantity of their treasures, such as gold, silver and so on. Stocks of such items were regarded as a measure of national wealth by mercantilists such as Kautilya (1961 [4th century BC]) and Mun (1928 [1664]) who recommended policies which might be adopted to increase these stocks. Also see the discussion by Tisdell and Svizzero (2016). However, as pointed out by Adam Smith (1776), these items did not constitute ‘real’ economic wealth. In fact, amassing them often reduced the economic wealth of states.

For example, effort put into mining or otherwise obtaining these treasures involved an economic opportunity cost. Other commodities which would have added to economic growth and wealth were foregone. In addition, the mercantilist recommendation that each state should strive to have an excess of exports over imports in order to increase its stock of treasure had counterproductive consequences. This is because such policies tend to reduce the total value of international trade. It is ironic that the evolutionary development of currencies that in the beginning fostered international trade, subsequently led to an economic system (the mercantilist system) which tended to stifle international trade and limit the realization of economic prosperity.

## Notes

1. Phoenicia was recognized as an entity after 1000 BC as a sub-geographical area of Canaan. According to Cunliffe (2017, p. 224) “the Phoenicians of the Levantine Coast who emerged to prominence [late] in the twelfth century were descended from the indigenous population of Canaan, whose roots go back to the third millennium”. The Canaanites of Byblos and Ugarit were significant traders and acted as middlemen in the trade between Egypt and Mesopotamia. Both these city-states were destroyed by hostilities prior to the rise of the Phoenician city-states to their south.
2. Nevertheless, sea-based trade was risky due to piracy and the possibility of ships being wrecked.

## References

- Aubet, M.E. (2001), *The Phoenicians and the West: Politics, Colonies and Trade*, Cambridge University Press, Cambridge.
- Bell, C. (2016), 'Phoenician trade: the first 300 years', in Moreno Garcia, J.C. (ed.), *Dynamics of Production in the Ancient Near East 1300-500 BC*, Oxbow Books, Oxford and Philadelphia. pp. 91-105.
- Bernholz, P. (1998), 'International competition among states: institutions, market regime and innovations in antiquity ', in Bernholz, P., Streit, M.E. and Vaubel, R. (eds.), *Political Competition, Innovation and Growth: A Historical Analysis*, Springer-Verlag, Berlin. pp. 109-125.
- Cunliffe, B. (2017), *On the Ocean: The Mediterranean and the Atlantic from Prehistory to AD1500*, Oxford University Press, Oxford.
- Demps, K. and Winterhalder, B. (2019), "“Every tradesman must also be a merchant”": Behavioral ecology and household-level production for barter and trade in premodern economies', *Journal of Archaeological Research*, Vol. 27, No. 1, pp. 49-90. doi: 10.1007/s10814-018-9118-6.
- Dunning, J. (1993), *Multinational Enterprises and the Global Economy*, Addison Wesley, New York.
- Earle, T., Ling, J., Uhnér, C., Stos-Gale, Z. and Melheim, L. (2017), 'The political economy and metal trade in Bronze Age Europe: Understanding regional variability in terms of comparative advantages and articulations', *European Journal of Archaeology*, Vol. 18, No. 4, pp. 633-657. doi: 10.1179/1461957115Y.0000000008.
- Heckscher, E.F. and Ohlin, B. (1991), *Heckscher-Ohlin Trade Theory*, MIT Press, Cambridge, MA, USA.
- Hodge, M.G. (1994), 'Aztec trade: a marketplace tradition', in Burenhult, G. (ed.), *New World and Pacific Civilizations: Cultures of America, Asia, and the Pacific*, University of Queensland Press, St Lucia, Queensland, Australia.
- Kautilya (1961), *Arthashastra*, 7th Edn., Shamasastri, R. [trans.], Mysore Printing and Publishing House, Mysore. [Original manuscript from 4th century BC.].
- Kristiansen, K. and Earle, T. (2015), 'Neolithic versus Bronze Age social formations. A political economy approach', in Kristiansen, K., Šmejda, L. and Turek, J. (eds.), *Paradigm Found: Archaeological Theory – Present, Past and Future. Essays in Honour of Evžen Neustupný*, Oxbow Books, Oxford. pp. 236-49.

- Leontief, W. (1953), 'Domestic Production and Foreign Trade; The American Capital Position Re-Examined', *Proceedings of the American Philosophical Society*, Vol. 97, No. 4, pp. 332-349.
- Markoe, G.E. (2005), *The Phoenicians*, 2nd Edn., The Folio Society, London.
- Master, D.M. (2003), 'Trade and politics: Ashkelon's balancing act in the seventh century BCE', *Bulletin of the American Schools of Oriental Research*, No. 330, pp. 47-64. doi: 10.2307/1357839.
- Melitz, J. (1974), *Primitive and Modern Money: An Interdisciplinary Approach*, Addison-Wesley, Reading MA, USA.
- Monroe, C.M. (2009), 'Seeing the world', *Bulletin of the American Schools of Oriental Research*, No. 356, pp. 81-87.
- Moore, K.J. and Lewis, D.C. (2000), 'Multinational enterprise in ancient Phoenicia', *Business History*, Vol. 42, No. 2, pp. 17-42. doi: 10.1080/00076790000000219.
- Mun, T. (1928), *England's Treasure by Forraign Trade*, Blackwell, Oxford. First published in 1664.
- Niemeyer, H.G. (2006), 'The Phoenicians in the Mediterranean. Between expansion and colonisation: a non-Greek model of overseas settlement and presence', in Tsetskhladze, G.R. (ed.), *Greek Colonisation. An Account of Greek Colonies and Other Settlements Overseas*, Vol. 1, Brill, Leiden. pp. 143-168.
- North, D.C. (1973), *Structure and Change in Economic History*, W.W. Norton & Co., New York.
- North, D.C. and Thomas, R.P. (1973), *The Rise of the Western World: A New Economic History*, Cambridge University Press, London.
- Ricardo, D. (1817), *The Principles of Political Economic and Taxation*, (Reprint, 1955) Dent, London.
- Sherratt, S. (2010), 'Greeks and Phoenicians: Perceptions of trade and traders in the early first millennium BC', in Bauer, A.A. and Agbe-Davies, A.S. (eds.), *Social Archaeologies of Trade and Exchange: Exploring Relationships Among People, Place and Things*, Left Coast Press, California, USA. pp. 119-142.
- Smith, A. (1776), *An Inquiry into the Nature and Causes of the Wealth of Nations*, W. Strahan and T. Cadell, London.
- Temin, P. (2006), 'Mediterranean trade in biblical times ', in Findlay, R., Henriksson, R.G.H., Lindgren, H. and Lundahl, M. (eds.), *Eli Heckscher, International Trade and Economic History*, MIT Press, Cambridge, MA, USA.

- Tisdell, C. and Svizzero, S. (2017), 'The Ability in Antiquity of Some Agrarian Societies to Avoid the Malthusian Trap and Develop', *Forum for Social Economics*, pp. 1-26. doi: 10.1080/07360932.2017.1356344.
- Tisdell, C.A. and Svizzero, S. (2016), 'Rent extraction, population growth and economic development: Development despite Malthus' theory and precursors to the Industrial Revolution', in Alauddin, M., Mujeri, M.K. and Nath, D.K. (eds.), *Bangladesh: Yesterday, Today, Tomorrow. Essays in Honour of Professor Sanat Kumar Saha*, Sahitya Prakash, Dhaka. pp. 53-64.
- van Alfen, P. (2015). 'Phoenician trade: An overview', Working Paper v.31.3.2015. Available at [https://www.academia.edu/20264101/Phoenician\\_Trade\\_An\\_Overview](https://www.academia.edu/20264101/Phoenician_Trade_An_Overview).
- Winterhalder, B.P. and Puleston, C.O. (2018), 'The Exchequer's Guide to Population Ecology and Resource Exploitation in the Agrarian State', *Cliodynamics: The Journal of Quantitative History and Cultural Evolution*, Vol. 9, No. 2, pp. 40-83. doi: <https://doi.org/10.21237/C7clio9239095>.

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