The golden interval of Old Assyrian trade (2000-1700 BC)

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THE GOLDEN INTERVAL OF OLD ASSYRIAN TRADE (2000–1700 BC)

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> From the earliest times of which we have record
> – back, say, to two thousand years before Christ –
> down to the beginning of the eighteenth century,
> there was no very great change in the standard of life
> of the average man living in the civilised centres of the earth.
> Ups and downs certainly. Visitations of plague, famine, and war.
> Golden intervals. But no progressive, violent change.
>
> John Maynard Keynes,
> "Economic Possibilities for our Grandchildren" (1930)

0. INTRODUCTION

The well-documented Old Assyrian (OA) pattern of trading is relevant to the study of global economic history. It contains some of the earliest detailed evidence on quantities and prices, commercial mores and infrastructure, and the geography of trade available to scholarly research.[1] The nearly 7500 published clay tablets (and about 17,000 still awaiting publication) constitute the earliest, and most comprehensive, documentation of an inter-regional trade system in which the traders were driven by one goal: acquiring profits, rather than procuring raw materials.[2] Dating to the first quarter of the second millennium BC, the documents were left by a group of merchants from Assur, an ancient city in northern Iraq. They established a flourishing trade between their own home city and networks of towns in Anatolia, using products imported from elsewhere in order to exchange them for gold and silver in Anatolia (and thereby profit from the exchange). This trade consisted of exporting commodities (mainly tin originally mined in central Asia and textiles manufactured in southern Mesopotamia) to Anatolia. These commodities were brought to Assur by foreign traders, and by the Assyrian traders themselves to central Anatolia, nearly

[1] For a selection of letters from different dossiers in translation, see Michel 2001 and Michel 2020. Recent editions of important text groups can be found in Veenhof 2017a; Larsen 2010; Larsen 2013; Larsen 2014, and other volumes of the series Kültepe Tabletleri (see: https://emagaza-ttk.ayk.gov.tr/ara/1/Kültepe_Tabletleri). Excellent introductions to the OA period are Veenhof 2008 and Larsen 2015. For a recent overview of the trade, see Dercksen 2014.

[2] For bibliographical details, see Michel 2003; Michel 2011; and Michel 2015.

a thousand kilometres away. The Assyrian merchants then sold these goods in Kanesh (the modern site of Kültepe) and other towns in Anatolia. This documentation seems to form an appropriate (and indeed ideal) set of data to consult when posing questions about economic growth in the ancient world.

Our understanding of the context of this material is far from complete. The home city of the traders – Assur – has been excavated, but we have virtually no evidence of these traders in the material found at Assur (although we learn from the documents found in Anatolia that they were, for example, purchasing houses and maintaining families in the city). And in fact, we know very little about the economy of the city-state of Assur at this time. It lay on the Tigris (a river which is quite unsuitable for irrigation) in the zone of rain-fed agriculture in northern Mesopotamia, and we have no idea how the temples functioned economically (compared with those in the south). In contrast to this, we are relatively well informed about the lives of the Assyrians in the Lower Town of the city of Kanesh in Anatolia as their houses have been excavated.

From an abundance of sources, it is known that the larger temple and palace institutions of the Near East tended large flocks of sheep and supported the production of textiles, but – aside from the Assyrian material found in Anatolia – we know virtually nothing about how the sale of these textiles was organised. In fact, it is for example only from the Assyrian documentation that we learn that southern merchants had a near monopoly on sales of textiles in Syria and Mesopotamia. Thus, what the Assyrians were doing was an essential activity, but we cannot assume that their activities were representative of how textile sales were organised. What is clear is that, for the couple of centuries that this trade endured, this small group of merchants – at most a couple of hundred families – enjoyed a considerable prosperity in the economic quality of their lives. However, it is by no means evident that we can locate them within economic history in a meaningful fashion. But what they offer is indeed a treasure trove that must be investigated and understood.

Studies into economic development and the possible causes of growth and decline in Antiquity often focus on the Greco-Roman world, and especially on the Roman empire during the first and second centuries AD (Hopkins 1978; Millett 2001; Saller 2002). Millett defined growth as the "increased output of goods and services per head of the population", taking up a point made by Hopkins and again stressed by Saller, that it is "essential to distinguish conceptually between per capita growth in production and aggregate growth" (Saller 2002: 257). There are obvious differences between the Classical world and Mesopotamia around 2000 BC, but also similarities, such as the role of agriculture and means of transport. For that reason, it is useful to repeat here some of the causes for growth that are identified by economists and have been applied by specialists in Roman economic history: trade, savings used for investments, technological improvement, increase in population, and changes in the institutional framework. In all the models and case studies of the Ancient Near East and the Greco-Roman world, agriculture dominates the economy. The key to growth is the formation of a surplus and Hopkins argued that an increasingly large surplus is due to political change and technical and social innovations. Millett remarked that "(p)otential for actual growth will ultimately depend on the increasing production of an agricultural surplus to support the non-agrarian population" (Millett 2001: 28). Hopkins formulated seven propositions in which he analysed the Roman economy; in the words of

Harris and Lewis these are:[3] (1) total agricultural production rose; (2) the population of the Roman world in the first and second centuries AD increased; (3) the proportion of the total population engaged in non-agricultural production and services increased; (4) as a result of an increased division of labour, non-agricultural production rose; (5) average productivity rose; (6) the total amount and proportion of total production extracted in rent and taxes increased; (7) the expenditure of taxes in the Roman provinces stimulated local production. Hopkins concluded that in the "first two centuries AD, total production, consumption and trade were greater than they had been in the previous centuries or were in subsequent centuries.", to which Millett commented: "The impression I have from all seven propositions is not so much of gradual growth in the surplus across 1200 years, as a spurt in the last two hundred. What Keynes (…) termed a 'golden interval' (albeit a long one) in the largely leaden pre-industrial age." (Millett 2001: 31).

The model outlined by Hopkins has been adapted by Jursa (2010), who developed the "commercialisation model" for Babylonia during the long sixth century BC. This model "sees population growth as a stimulus for commercial development and technological progress; rising demand generates positive feedback in the economy which offsets (for a while) the Malthusian threat accompanying demographic growth." This dynamic model is opposed to a static view of Mesopotamian economy, which Jursa calls the "traditional model", and which he characterises as suggesting

> that the most important landowners, the institutional households (temples and the royal household), dominated the economy, depended on compelled labour and produced most of the surplus that was available to society above subsistence needs. Food was redistributed and consumed within the institutional households; only a small part was marketed through private businessmen who depended on the institutional sphere for finding scope for commercial activity. Also the well-attested urban property holders strove primarily towards self-sufficiency, depending on their estates in the cities' hinterland. The dominant household mode of production limited the importance of hired labour, craft specialisation and generally market exchange, whose impact on the subsistence strategies of Babylonians was negligible. Business in the private sphere of the economy was mostly limited to disposing of more or less accidental agrarian surplus production, and even this did not affect the communal world of the village, which was essentially a world apart, entirely untouched by silver-based exchange. Productivity levels in Babylonian agriculture, by far the most important economic activity, were static. As in every other pre-modern agrarian economy, its potential to achieve an increase in per capita production and thus sustained economic growth was very limited.[4]

This is a long quotation but it contains a number of salient statements that are also illustrative of the way some specialists in ancient Mesopotamia view the economy during the late third and first half of the second millennium BC, the Ur III and Old Babylonian periods, and according to which the OA trade was exceptional – an oddity.

Yet, the OA economy was a-typical as all economies in the Ancient Near East were predominantly agricultural in nature. A significant limitation in our source material is the

[3] Harris & Lewis 2016: 5.
[4] Jursa 2010: 784.

nearly total lack of references to agriculture in Assur, which forms a strong contrast to the evidence from the Anatolian city of Kanesh. Comparison with other societies is further hampered by the apparent non-existence of temple households in Assur exploiting large tracts of land and cattle, such as are known from south Mesopotamia during the Ur III and Neo-Babylonian periods. Assur comes across as a more or less barren rock with little in the way of natural resources, and largely dependent on the import of essential goods.

Modern research into economic growth deals with long-term developments in one economy or more, and draws on a large quantity of data collected over several centuries. Although the OA trade spans nearly three centuries and involves several, interconnected economies, the data at our disposal are unequally divided; most of the data concern OA but many stem from a relatively short spell. This makes it difficult to identify any "sustained increase", whether in the economy as a whole or in segments of it. Rather, the growth that can be observed or hypothesised, was extensive in nature and represents one of the upsurges in world history. It is therefore important to establish what led to this growth in this phase of the Ancient Near Eastern economy and what caused it to decline or even stop;[5] the available textual evidence must be scrutinised in order to gain insight into the volumes concerned and the effect this had on people and polities.

This chapter starts with the geographical and historical background of the OA trade. Next, its structure and development will be analysed in section 2, followed by a discussion of the volume of trade and its implications in section 3. Finally, possible causes for this episode of growth will be discussed in section 4.

1. OA TRADE IN ITS GEOGRAPHICAL AND HISTORICAL SETTING

Trade relations between Anatolia and southern Mesopotamia had existed since prehistoric times and had a strong impact on cultural and political developments. The political centralisation process that started in central Anatolia in the mid-third millennium and led to a region with a shared material culture to which the inland region of western Anatolia was linked, was driven by several factors, most prominently the exploitation of metal resources (copper, silver, gold) in Anatolia and the trade in these metals. The development of metallurgy in central Anatolia was probably equally stimulated by these contacts with Syria-Iraq and western Anatolia.[6] Archaeological evidence from sites such as Kültepe (north-east of Kayseri) has led to reconstructions of several interregional exchange networks between Syria-Iraq and the Aegean,[7] such as the 'Great Caravan Route' of the Early Bronze Age III period (ca. 2500–2200 BC), or, as part of a huge 'Super Network',[8] the 'Anatolian Trade Network' connecting Cilicia and the Troad.[9]

[5] See Morris 2005: 24.
[6] Yakar 2011: 460; Bachhuber 2012; Lehner 2014; Zimmermann 2016.
[7] Rahmstorf 2015.
[8] Massa & Şahoğlu 2015: 71.
[9] Ökse 2007; Efe 2007; Steadman 2011: 232–233.

The view that the Aegean region was the likely source of silver for traders from Anatolia is widely held and is based on the assumption that the galena deposits at Laurion were already being exploited at that time. However, recent research demonstrates that Middle Bronze Age Near Eastern silver did not stem from the smelting of lead-silver ores (such as galena), but from the smelting of argentiferous ores to which lead was added to recover the silver.[10] This means that silver was probably not mined at Laurion before the mid-first millennium BC, whereas lead ores as a source of silver were not exploited in Anatolia before the seventh century AD according to Meyers (2003). Although Laurion might have been exploited at that time, it can certainly no longer be regarded as the source of silver traded in MBA Anatolia, but silver mineralisations are attested or can be assumed to have existed and exploited in other places in the Aegean, notably at Siphnos. The model according to which silver was brought from the Aegean region to Anatolia in exchange for copper and the tin and textiles imported by the Assyrian merchants, may not be completely obsolete, but part or perhaps even most of the silver circulating in Anatolia during the time of the Assyrian merchants will have stemmed from local deposits.[11] It is not known whether these merchants in any way contributed to the exploitation of silver. Lead is rarely mentioned as an object of trade in the Assyrian documents.[12] Were we to postulate that they might have been interested in the production of silver, they would doubtless have been eager to participate in the shipment of lead to facilitate the smelting of silver. The scarcity of references to lead suggests that these merchants were neither involved nor interested in the production of silver: only in its acquisition.

As a result of the interaction in Anatolia itself and connecting it to the Near Eastern world, by the end of the third millennium, central Anatolia consisted of several polities each grouped around an urban centre, much like northern Syria and northern Mesopotamia. An important position was held by Kültepe, the ancient city of Kanesh,[13] where the so-called Old Palace was constructed about 2020 BC[14] and a lower town developed ca. 2000 BC. Pottery, cylinder seals, and seal impressions as well as funerary evidence found at Kültepe attest to trade contacts with Syria and Mesopotamia at the end of the third millennium.[15] At the same time, Mesopotamia consisted of a highly developed civilisation concentrated in the central and southern parts of modern Iraq (Akkad and Sumer), with outlying cities in the north (Assur and Nineveh, both on the river Tigris) and the west (Mari on the Euphrates), which had witnessed two historical periods of imperial expansion, the Old Akkadian and that of the Third Dynasty of Ur (aka Ur III in this volume and elsewhere). In the south, the economy was based on irrigation agriculture (barley, wheat) and herding. Local textile production had reached high standards due to the use of high-quality wool,

[10] Wood, Hsu & Bell 2021.

[11] A piece of silver found at Acemhöyük stems from the Taurus according to lead isotope analysis, see Türkekul 2001: 73.

[12] An interesting passage occurs in TMH 1, 3b (HS 281): "He went to Šalahšua for gold, but I heard that he went to Hurama because there was nothing else than lead"; see also Barjamovic 2011: 193–194.

[13] Palmisano 2017: 38.

[14] See Barjamovic, Hertel & Larsen 2012: 29.

[15] Ezer 2014; Kulakoğlu 2015; Kulakoğlu 2017; Öztürk 2019.

weaving and finishing techniques, and the organisation of labour. Bureaucrats and merchants used writing on clay tablets to record and communicate. The principal means of transportation was by boat (especially in the south with access to the Gulf, and over the main watercourses), but also overland by wagon over short distances and by donkey over longer ones. The necessary importing of metal, stone, and timber was largely realised through trade. Late third-millennium Assur seems to have been an economically unspectacular though politically independent city.[16]

Possible effects of the 2200–1900 BC period of drought on caravan logistics (especially in the Khabur area in north-eastern Syria), settlements, and exchange remain unclear,[17] but it is noteworthy that the early second millennium saw a growth in population not only at Assur, but in the whole eastern Tigris region[18] as well as along the caravan routes, where an increase in settlement area can be observed in northern Jazira.[19]

The purpose of the OA network was to obtain silver and to a lesser extent gold by selling imported tin and garments in central Anatolia, which yielded a net profit of about 50% to the Assyrian traders.[20] The textiles were imported from southern Mesopotamia ("Akkad"), but smaller quantities were manufactured in Assur as well.[21] The main transit point for tin to the west seems to have been the city of Susa in southwest Iran. From there, it was brought to central and south Mesopotamia, to the west and to Assur. Along with tin, small quantities of luxury goods arrived, such as iron, lapis lazuli from Afghanistan, and carnelian from Pakistan.

2. The development of OA trade

The extensive written records excavated at Kültepe and a few other ancient towns in Anatolia offer detailed insights into private economic activity and the reconstruction of the Assyrian eponym list makes it possible to establish a chronological framework. But for studying economic developments and issues such as growth, this material by itself is not always sufficient as a basis upon which to base firm conclusions and I shall necessarily have to resort to hypotheses. The OA period can be put into perspective by the evidence for pre-OA relations between Kanesh and Mesopotamia found at the mound of Kültepe and dating to the end of the third millennium, and by the fact that the final level of the lower town (Level Ia) at Kültepe does not contain any written evidence for the presence of Assyrian merchants. These two form the temporal corridor within which the trade existed.

[16] Michalowski 2009.

[17] Cf. Massa & Şahoğlu 2015: 75.

[18] Battini 2011: 130.

[19] Wilkinson & Tucker 1995: 88; Ur 2010: 159.

[20] Dercksen 2014. For silver, see Veenhof 2014.

[21] For the significant role of textiles in various cases of ancient trade, see Droß-Krüpe 2016; for OA textiles, see Michel & Veenhof 2010.

The almost three hundred years of OA trade (ca. 2000–1700 BC) are very unevenly represented in the written record as is apparent from the comparison of attested names of year-eponyms with lists in which the names of these office holders are arranged in chronological order.[22] With the help of the list of eponyms, which in its last reconstruction is referred to as the Revised Eponym List (REL), it has been possible to demonstrate that most of the main dossiers (often called "archives") stem from a relatively short period of about thirty years (REL 80–110, ca. 1893–1863 BC). This means that there exists a wealth of information concerning only a few decades, but little or none at all from other periods.

The oldest year-eponym mentioned is REL 42, ca. 1931 BC, referenced in a single text (AKT 6A, 1). A year-eponym was usually only mentioned in a document when the calculation of interest was involved and most documents lack any form of dating. Moreover, the evidence has a strong geographical bias, since most of the texts found in Kanesh deal with business in Anatolia and in Assur. To this can be added that at best only part of any given merchant's archive has survived and that his activities can only be incompletely followed over a short period of time. In short, the Assyrian evidence is unequally distributed in time and space.

Moreover, the Anatolian perspective is severely under-represented in the written record. There are no surviving documents from palace archives in Anatolia that would enable us to obtain data on local production. A small number of Anatolian dossiers written in Assyrian has been discovered, but these too add little to a discussion of economic development apart from their obvious importance as witnesses of cultural adaptation. In addition, however, there is a relatively small number of Assyrian documents – 450 texts according to Günbattı[23] – dating to the Level Ib period (ca. 1800–1700 BC) from which hitherto an important source for that high quality quantification attested in the evidence from the Level II period (the letters and other texts dealing with caravans travelling between Assur and Kanesh dealt with here) is otherwise completely lacking.

The absence of any contemporary evidence about this trade from south Mesopotamia underlines the unique and essential position of the Kültepe epigraphic material. At the same time, it explains our ignorance of many aspects of this trade pertaining to Babylonia and Susa.

Three phases can be distinguished in the history of OA trade: its beginnings (represented by Kings Ilušuma and Erišum I and their successor), its heyday (ca. 1893–1865), and its downfall (a long period of decline from about 1865–1700).

2.1 *The beginnings*

The transition from Early to Middle Bronze Age at the end of the 21st century BC was characterised by major changes in material culture, settlements, and political constellations. The OA trade is one of these new features. The influence on Assur of political developments in the South (the collapse of the Ur III empire and the rise of the state of Isin) will

[22] Called the Revised Eponym List, abbreviated REL, see Barjamovic, Hertel & Larsen 2012.
[23] Günbattı 2014: 11.

have been different from the impact these had on the Iraqi and Syrian Jazira. Schwartz has discussed the possible factors that led to early second millennium innovations after a period of disintegration.[24] In Assur, there is apparent continuity in political structures in the form of a king who was called the "city ruler" ($ensi_2$, an Ur III administrative term) as head of the city, but with the city assembly playing an increasingly important role, a characteristic also displayed by other cities in the Mesopotamian periphery with a strong interest in trade such as Sippar and Emar.[25] External input is evident in the apparently novel possibility for the area of becoming a transit place for the export of tin, adding a new commodity to the traders living along the age-old trade routes in north Mesopotamia.[26] The non-elite participation in the trade led to the rise of a new class formed by merchants with significant financial and political power, represented in the city assembly; members of this class frequently held the prestigious office of year-eponym (*līmum*).[27] The important development of a local set of cuneiform signs based on what was employed in the Ur III period, but now characterised by a relatively small number of different signs, led to a society with high passive and active literacy, at least among the families of merchants.

There is evidence of the activity of individuals from Mesopotamia in Kültepe in the post-Akkad and Ur III period (ca. 21st century BC). This consists of seal impressions on clay bullae and of cylinder seals showing Mesopotamian motives and occasionally a personal name written in cuneiform. Unfortunately, the toponym Kanesh is not mentioned in a single text from the Ur III period or shortly before; this is in contrast to Hahhum, a town situated on the Euphrates (Lidar Höyük or Samsat), which formed the frontier between Mesopotamia and Anatolia, from where Gudea of Lagash obtained gold and whose ruler made some gifts registered in Sumer.[28] Texts from south Mesopotamia thus lack any supporting evidence for the contacts that seem nonetheless to have existed.[29] The only positive evidence for contact with Assur consists of a cylinder seal found on the mound of Kültepe in 1953 (Kt. e/t 180),[30] which contains a reference to the deity Aššur. The nature and intensity of these contacts remain unknown, but the bullae suggest trade. This may have evolved, perhaps with interruptions, into the OA trade.[31]

The initial phase is thought to have been characterised by venture trade, possibly resembling the preceding format of trade relations. Early evidence takes us to a complicated debate in Assyriology. From the 25th century BC onwards, a Sumerian word (amargi) is used mainly in royal inscriptions, which according to an authoritative dictionary means "release

[24] Schwartz 2012: 256–259.

[25] Larsen 1987.

[26] Whether or not other towns in northern Mesopotamia (such as Nineveh) to some extent participated in this trade remains unclear through a lack of sources. Ekallatum is not attested in Assyrian texts dating to the OA dynasty; only after Samsi-Addu's conquest of Assur do we hear of merchants from that town. It may have been under the domination of the city-state of Assur before that.

[27] Dercksen 2004.

[28] RA 74, 47 CBL CT 116: 22 (with mention of the towns Urkeš, Talhat and Tuttu(l)); UTI 3, 2232:2.

[29] The composition *King of Battle*, featuring Sargon of Akkade as the hero of Akkadian merchants oppressed by the king of Purušhattum, is in my view legendary as Sargon never refers to Anatolian towns in his own inscriptions; it does not inform us about pre-Old Assyrian trade contacts with Anatolia.

[30] Balkan 1957: res. 12; Öztürk 2019: no. 024.

[31] Veenhof 2008: 126–130; Barjamovic, Hertel & Larsen 2012.

(from slavery, debt, taxation, punishment)", "exemption", "freedom", "manumission".[32] Its equivalent in Akkadian texts from the second millennium is the word *addurārum*. In this sense, two early kings of Assur deserve special attention: Ilušuma and his son Erišum I. King Ilušuma (?–1973 BC) proclaimed the first documented *addurārum* "freedom" in Assur. He stated: "I established the freedom (*addurār x aškun*) of the Akkadians and their children. I purified their copper. I established their freedom from the border of the marshes and Ur and Nippur, Awal, and Kismar, Dēr of the god Ištaran, as far as the city (Assur)".[33] Yet there is something peculiar about this: the people benefitting from these measures were Akkadians, the inhabitants (or rather merchants) of southern Iraq. The passage about copper may refer to a route via Assur by which the South obtained some of its copper at that time. The implication of the first measure is disputed as such "freedoms" were normally proclaimed by a ruler who politically dominated those who benefitted from it. As there is no indication that Assur effectively controlled parts of southern Iraq at this time, Ilušuma's measure is interpreted as an attempt to make the market of Assur more attractive for foreign traders by offering the Akkadians an "exemption", abolishing certain debts and taxes in the region under the control of Ilušuma in the north.[34] Merchants from Babylonia ("Akkad") travelled to Assur in the OA period and there was a market where caravans from Ur used to arrive.[35]

The second OA king to proclaim a "freedom" (*addurār x aškun*) was Erišum I (1972–1933), who in the translation by Grayson "made silver, gold, copper, tin, barley, and wool tax-exempt as well as payment of bran and straw (tax)", with a different rendering of the same Akkadian word.[36] This was done in connection with construction work on the temple of Aššur and apparently served to somehow bring relief to the city. One may ask for whom this relief was intended, for the general population owing taxes and labour to the state, or for an unspecified segment of that society. Veenhof regarded it as a "measure taken to further the prosperity of Assur, in particular by stimulating a free exchange of goods".[37] A different interpretation may be obtained by considering a number of Sumerian documents from the Gudea period (21st century), to which Kraus drew attention nearly half a century ago, and in which the phrase "release granted" (ama-ar-gi$_4$ gar-ra) occurs.[38] These documents list silver, bronze items or barley. Wilcke now interprets this term (which is practically the equivalent of Akkadian *addurāram šakānum*) as the annulment of arrears of officials.[39] Whether or not that applies to the measure of Erišum I, his *addurārum* may not have been so much a sign of prosperity as of indebtedness. Another episode of economic hardship may be reflected in the decision by the city assembly to meet merchants who were debtors about a century later.[40]

[32] Sjöberg 1998: 208.
[33] Grayson 1987: 18.
[34] Larsen 1976: 78–80; Larsen 2015: 96; Veenhof 2008: 127.
[35] Dercksen, forthcoming.
[36] Grayson 1987: 22.
[37] Veenhof 2008: 128–129.
[38] Kraus 1970: 30; Kraus 1984: 104.
[39] Wilcke 2007: 25.
[40] Veenhof 1999a.

Erišum I may have been the king during whose reign the OA trade commenced. A case fragment bearing an impression of his seal was found at Kültepe, which may have enclosed a document sent by him or in his name. He was also associated with the creation of the institution of the office of year-eponym (*līmum*) and with legal reforms. The creation of the office of *līmum* (first attested in 1972 BC) must have resulted from previous political and economic developments and may have been intended to curb royal power by imposing this on the new and perhaps young king. The same developments may have caused the creation or, if it already existed in some form, the rise to a higher status of the City Hall (*bēt ālim*) of which the year-eponym became the manager (hence the synonym *bēt līmim* "House of the eponym"). These institutions became key features of the OA trade together with the government of Assur (king and assembly), and the treaties it concluded with foreign rulers; this makes it highly unlikely that a trade on a similar scale was possible one or two centuries earlier.

The abundant documentation in the form of letters, contracts, notes, and other texts unearthed in Kültepe dates to a period when trade had already reached a mature phase. An isolated piece of older evidence is derived from document AKT 6A, 1, mentioned above, which contains a reference to eponym REL 42 (ca. 1931 BC) from the beginning of the reign of King Ikunum.

By the end of this initial stage, Assur had established itself as an international player by building good relations with those polities from which textiles and tin were brought to the city. It also exploited contacts with the central Anatolian city of Kanesh to enable venture trade, which around 1950 BC grew into a permanent commercial presence and, significantly, led to an Assyrian monopoly on the import of tin and textiles into Anatolia. The political and legal institutions that were created in Assur greatly supported the business of its inhabitants.[41]

2.2 *The heyday (ca. 1893–1865 BC)*

Little is known of the reign of the Assyrian King Sargon (1917–1878 BC), except for the fact that he chose as a throne name the name of the first great Old Akkadian king and that he reigned for forty years (like his grandfather Erišum I). A growing local confidence can be observed during his reign, reflecting no doubt the successes of the trade with Kanesh, which expressed itself in the development of a local glyptic style and cuneiform syllabary. Documentary evidence of many of the known merchants from Level II is provided by their texts, excavated at Kültepe; these texts can be dated back to the reign of Sargon.

Through the adoption of the existing southern Mesopotamian model of establishing trading posts in foreign towns, dozens of trade colonies (*kārum*) and stations (*wabartum*) were established along the caravan route between Assur and Kanesh and in central Anatolia.[42] Treaties taken under oath concluded between Assur and the local rulers formed the legal

[41] See Hertel 2013.
[42] See Palmisano 2017.

framework for these settlements and their residents to thrive.[43] The settlements in Anatolia enabled the Assyrian merchants to establish a long-term physical presence in the economically most relevant regions, making it possible to increase their activities.

During the heyday of OA trade a significant quantity of silver and gold reached Assur, and a large part of it was used to purchase tin and textiles. The starting-point of this phase may have been around 1893 BC (REL 80), because in the decade or so leading up to that year the situation of Assyrian merchants at Kanesh seems to change. This is reflected in the major increase in the number of preserved documents. The possible causes that may have occasioned this increase during the period 1893–1863 BC (REL 80–110) have been discussed by Barjamovic, Hertel and Larsen,[44] including structural changes in trade (permanent settlement and long-term partnerships, expansion leading to more debt-notes being drawn up). There are indications that the number of Assyrians active in Kanesh reached the highest level during this period. Although this coincides with the supposed end around 1900 BC of the period of drought, which began in ca. 2200 BC and caused settlement abandonment in marginal zones in northern Syria, the climatic evidence for this period is not unequivocal. One of the towns on the caravan route used by the Assyrians was Tell Leilan. The Leilan Regional Survey shows the dramatic decline in the number of sites during 2200–1900 compared to the preceding period, and the sharp rise during 1900–1700, indicating massive population growth.[45] This change is attributed to the end of the arid period. But the evidence from neighbouring Tell Mozan indicates that rainfall there decreased after 1900 BC,[46] from which Schwartz concluded that "The successes of urban societies in the second millennium were attained despite climatic challenges".[47] If the increase in the number of Assyrians and documentation from Kültepe may be related to better travel conditions on the caravan route across the Jazira, this probably was caused by improved infrastructure instead of ameliorated weather conditions; the increased number of Assyrians may have been due to a growth in population in Assur itself.

The typical Assyrian firm during the 19th century was family-based and involved a father and his sons, often staying in Kanesh for a longer period, supported by a wife and other relatives in Assur or in Anatolia, all communicating with each other by letter.[48] Some merchants in Assur seem to have used non-family personnel to handle their affairs in Anatolia.[49] There were bankers (*ummeanu*) living in Assur, often merchants themselves, who looked after the business of several traders engaged in Anatolia by purchasing merchandise and equipping caravans. Capital could be obtained through short-time partnerships.[50] A major innovation was the introduction of a long-term joint-stock capital called

[43] Veenhof 2013.
[44] Barjamovic, Hertel & Larsen 2012: 58–69.
[45] Ristvet 2012: 40.
[46] Pfälzner 2012: 71.
[47] Schwartz 2012: 259.
[48] Larsen 2007.
[49] Stratford 2014.
[50] Larsen 1977; Veenhof 1999b; Dercksen 1999.

naruqqum "leather bag", which enabled an independent trader to obtain credit.[51] This still imperfectly understood financial tool consisted of founding a partnership to run for ten or more years into which a dozen or so individuals (other merchants, relatives, also the merchant himself) invested a sum of silver that was expressed in gold, and which the merchant managed ("carried the bag" in Assyrian) under the supervision of his bankers. After the "bag" had been established, a shareholder could acquire additional shares, mostly, it seems, by converting a claim on the merchant into a share for the same nominal amount. Moreover, shares could be inherited and sold. The original *naruqqum* contracts were kept in Assur and have not been recovered; only a few transcripts of original contracts have been excavated in Kültepe. The "bag" of a merchant called Elamma contained nearly 28 pounds of gold valuta (the equivalent of 112 pounds of silver) and ran for ten years starting in 1895 BC (REL 78).[52] That of Amur-Ištar contained 30 pounds of gold valuta (the equivalent of 120 pounds of silver) and had a term of twelve years starting in 1908 BC (REL 65).[53] It is highly unfortunate that so few of these contracts are known. The concept of adding interest to a debt was well known in ancient Mesopotamia. In OA trade, interest (*ṣibtum*) was mainly charged from defaulting debtors and from people borrowing silver (or copper) at "a merchant's house" in Assur to finance pressing business transactions.[54] The earliest known rate of 33.3% (once-only or per year?) dates to ca. 1931 BC (AKT 6A, 1). A slightly lower rate of 30% per year was standard among traders from at least 1906 BC onwards and was decreed by the Kanesh colony, but different rates existed as well.[55]

2.3 *The period of decline (ca. 1865–1700)*

The slow downfall of the OA trade took almost a century and a half. It was inaugurated by the death of the generation of merchants who had settled in Anatolia more or less permanently, men such as Pušu-ken, Imdi-ilum, and Elamma, who disappeared from the documentation around 1870 BC (REL 103). The shortcomings of the existing social and economic system became visible and could not be mended: the firms were basically tied to one person and ended when he died. There was no firm as such to be continued by a son or other heir. The number of Assyrians active in Kanesh seemed to decrease as well and a new phase of reduced economic activity began. The decline during the final decades of the Level II settlement has been summarised by Barjamovic, Hertel and Larsen, who stated that

> a combination of social, legal, economic and commercial factors associated with the disappearance of the generation of family heads over a short period of time resulted in successive blackouts in interdependent parts of the commercial network. Ultimately this led to an economic recession in the overland trade around 1865 BC (REL 108) that came to affect most of the Assyrian traders.[56]

[51] Larsen 1999.
[52] Veenhof 2017a: 3–4.
[53] Hecker 2004: 44.
[54] Veenhof 1999b; Dercksen 1999.
[55] See Dercksen 2014: 94–96.
[56] Barjamovic, Hertel & Larsen 2012: 72.

Warfare in Anatolia could severely hamper trade and the city of Kanesh itself and its lower town (Level II) were destroyed in 1834 BC, but soon resettled. The Assyrian presence in Kanesh during the 18th century, coinciding with the so-called Level Ib period in the lower town, is rather poorly documented. Yet, also during this period the caravan trade between Assur and Kanesh continued and tin and textiles were still imported, as additional evidence from texts from Mari and Tell Leilan demonstrates. But certain key elements had disappeared, notably the long-term joint-stock investments (*naruqqum*); moreover, the Assyrians in Kanesh became increasingly involved in the trade in Anatolia itself and many of them had been born in Anatolia and had Anatolian relatives.[57]

There were also political developments in Assur itself. The local dynasty exercising kingship in Assur was overthrown by Samsi-Addu (also known as Šamši-Adad I) in 1808 BC, who incorporated the city-state into his expanding empire. Trade continued under his reign and bullae found at Acemhöyük demonstrate that he sent goods to that town, perhaps as merchandise.[58] From correspondence found in Mari we learn that in an as yet unclear way merchants of Assur cooperated with those from the neighbouring town of Ekallatum. During the post-Samsi-Addu period Assur participated in and suffered from military confrontations.

The various uprisings in southern Babylonia against the Babylonian king Samsu-iluna led to an end of documentation (and of urban life) there by 1737 BC for southernmost Sumer and by 1719 also for northern Sumer; the disappearance of this once economically important region would have had a serious impact on any export of textiles from Babylonia to Assur if this still played a role in OA trade at that time. About a decade later, the destruction of ancient Apum (Tell Leilan and its land) in north-eastern Syria, which was on the caravan route to Kanesh and harboured an Assyrian community, by Samsu-iluna in 1728 BC, must have had a negative impact on the trade,[59] as it led to a regional collapse in settlement.[60] The most recent Assyrian year-eponym recorded in a text found in Kanesh (the eponym list G) dates to 1717 BC (REL 256). Not long afterwards, Kanesh was again destroyed and the an-epigraphic next level of occupation in the lower town (Level Ia) lacks any positive evidence of an Assyrian presence. With the disappearance of Assur's main centre in Anatolia (and apparently of the other settlements as well), the OA trade as we know it came to a definitive halt.

3. Growth and decline: estimation problems

The incomplete nature of the written evidence reflecting the OA trade does not permit us to calculate the total amount of silver and gold that a merchant sent to Assur during his active years or that of the tin and textiles that he or his representatives in Assur bought and sent to Kanesh. The evidence that is available concerns several shipments within an

[57] For trade during the Ib period, see Dercksen 2001; Barjamovic, Hertel & Larsen 2012.

[58] See Günbattı 2014: 91–92 for a letter relating Samsi-Addu's attitude towards traders; Veenhof 2017b: 251–253.

[59] Cf. Charpin 1988; Charpin 2004: 351.

[60] Ristvet 2012: 40.

unknown timespan, as letters and most documents related to the sending of money and the purchase of merchandise do not contain a date. Many merchants' archives excavated at Kanesh contain a number of such texts and archival reconstruction may help to assign these to a particular moment in a merchant's career. The quantities of silver and gold sent to Assur and of merchandise purchased in that city may differ significantly among different merchants and even within the records of a single individual. The sending of relatively modest amounts of silver or merchandise may reflect on the one hand a merchant's status within OA society, but may also on the other hand point to a strategy to spread the risks of transport or of price fluctuations.

Larsen put the number of inhabitants of Assur during the 19th century at 7000–10,000, and he reckoned that 2000–4000 (male) persons were involved in trade.[61] If for the sake of argument we assume that the city had had an equal percentage of men and women, this would mean that some 1000–1500 men were active in a sector not directly devoted to trade. This number may be too low, see the 2000 soldiers of Babylon and a contingent of 2000 men of Ekallatum and Assur led by Mut-Asqur, son of Išme-Dagan, according to ARM 26/2, 411:32 (about 1770 BC).

During the 18th century BC the city of Kanesh covered an area of 170 ha and had about 25,000 inhabitants, showing it to have been a major urban centre; Barjamovic estimated the population of central Anatolia at nearly 500,000.[62] The minimum number of Assyrians present in Anatolia during the well-documented thirty years 1893–1863 BC (REL 80–110) is put at 700–800.[63]

Estimation problems relate to the number of merchants involved and the annual and long-term volume of the trade. Recent scholarship has (re)addressed these problems and various estimates of the volume of the OA trade and the number of Assyrians involved have been proposed. The first estimate was made by Veenhof,[64] who collected the evidence from 189 caravan texts dating to the Level II period and arrived at about 17,500 textiles and 13,500 kg of tin, in all representing some 850 donkey-loads. In view of the considerable increase in the number of relevant texts, Veenhof later stated that these figures have at least to be tripled, while those for the whole Level II period would have been considerably larger.[65] Starting from the quantities established by Veenhof in 1972 based on about one-eighth of the presently known number of texts, Larsen arrived at about "110 tons of tin and 115,000 textiles over a period of thirty years, or nearly 4 tons of tin and ca. 3,800 textiles every year. That would correspond to about 110 donkey-loads of textiles and 55 loads of tin. Those figures would seem to represent a minimum (…) so the figures could easily be doubled without much danger of error."[66] For this at least 18,000 kg of silver were brought to Assur in return.[67] On average 600 kg of silver would have been shipped

[61] Larsen 2000: 79.
[62] Barjamovic 2014: 66.
[63] Barjamovic, Hertel & Larsen 2012: 60.
[64] Veenhof 1972: 70–76 lists the evidence of "189 texts"; the actual numbers appear in Veenhof 2008: 90.
[65] Veenhof 2008: 90.
[66] Larsen 2015: 190.
[67] Larsen 2015: 190–191.

to Assur during each of these thirty years, whereas the estimated 3800 textiles and 4000 kg of tin sold in Anatolia each year would have yielded about 1000 kg of silver.

Whereas Veenhof and Larsen imagined that several hundred donkey-loads were transported from Assur to Anatolia each year, Stratford argued for no less than 5000 donkey-loads, and "[i]f this were equally divided, it would yield 62,500 textiles and 200 tons of tin" exported each year.[68] He arrived at this high number through his reconstruction of the frequency of caravans and the number of merchants. Barjamovic[69] suggested that the trade involved ten caravans of 150 donkeys each setting out for Anatolia each year during the well-documented three decades of the Level II period, and these 1500 donkeys would have carried 15 tons (= 500 talents) of tin and 32,000 textiles.[70]

The quantities of silver sent to Assur obviously differ considerably between the estimate by Larsen (more than 1 ton per year) and that by Stratford (33 tons).[71]

Stratford's number of 5000 donkey-loads seems to be a postulate, as no explanation is given as to how the author arrived at it. His point of departure is what is documented for the "very wealthy" merchant Šalim-ahum: 41 donkey-loads carrying 1 ton of tin and 425 textiles,[72] and in Stratford's reconstruction of events this represents the merchant's volume of trade for one single year. His next step is to estimate how many Assyrian traders were active at a given moment in Anatolia, and this number is put at 900–1000 individuals, which seems reasonable. The author writes: "it (i.e., a review of two archives – JGD) points toward an estimated thousand merchants, or more, involved in the trade. And it is feasible that less than half of those merchants could field the estimated 5000 donkey-loads each year. In fact, the number of donkey-loads could easily be reached with a few dozen major traders, less than a hundred middle-sized traders, and a few hundred minor traders taking a few donkeys a year."[73]

An important piece of evidence adduced by Stratford and Barjamovic in their estimations are the so-called lists of declared value (*awītum*), which express the value of tin, textiles, and donkeys of a caravan in a single valuta of tin, to facilitate the calculation of taxes and other expenses.[74] The assumption is that these lists document the value of a caravan travelling from Assur to Kanesh, formed by several merchants who wanted their goods to travel together for reasons of safety and efficiency. The caravan was named after the owner of the largest section. Two of the few surviving lists refer to very large transports and itemise the shipments of individual merchants and other owners of merchandise therein. VS 26, 155 lists the contents of the caravan (*ellatum*) of Imdi-ilum, that is, the caravan under his administrative responsibility. It consists of 35 sections of different volume ranging from 47 talents to a little under 1 talent, totalling 410 talents 11 minas. The

[68] Stratford 2017: 292; Stratford 2019: 222.

[69] Barjamovic 2017: 312; Barjamovic 2018: 141.

[70] Note that the much higher figures attributed to Barjamovic in Stratford 2017: 296 must be based on a preliminary and later revised version of Barjamovic 2018.

[71] Stratford 2019: 222.

[72] Stratford 2019: 293.

[73] Stratford 2017: 305.

[74] See Dercksen 2004.

sections were owned by 34 different persons, one of whom was a woman (Šat-Aššur). Estimates of the number of donkeys involved in this text vary greatly; Veenhof suggested that Imdi-ilim's caravan consisted of 150–200 donkeys.[75] Barjamovic argued that over 500 donkeys were involved, carrying about 6000 kg of tin and 12,000 textiles;[76] in my calculation this would give a declared value of 608⅓ talents. However, if it is compared to the value of Kt c/k 401,[77] the declared value in VS 26, 155 is about twenty-nine times larger, and consisted of 348 donkeys carrying 188½ talents (5655 kg) of tin and 6612 textiles.

The other text is VS 26, 154, where 21 sections are listed with in all 125 talents 21 pounds as the declared value. By the same comparison, this would involve a caravan of 108 donkeys.

These two cases demonstrate that caravans (if the meaning of *ellatum* is correctly interpreted) leaving from Assur could differ considerably in size. This, and the fact that it remains unclear how many caravans left Assur in a year hampers any reconstruction of the volume involved in the OA trade.

The high amount of declared value or large numbers of animals in some texts may be misleading, as the merchant involved did not always sponsor such numbers. Imdi-ilum, for instance, is known to have had the following transports with (estimated) declared value and number of donkeys: 47 talents (VS 26, 155); 12 talents 19 minas / 7 donkeys (CTMMA 1, 75 first shipment); 10 talents 10 minas / 4 donkeys (AKT 1, 18); 9 talents 8 minas / 8 donkeys (Sadberk Hanım no.12); 2 talents 41 minas / 1 donkey (CTMMA 1, 75 second shipment).

The estimated number of donkeys leaving Assur per year thus ranges from several hundred (Veenhof, Larsen) to 1500 (ten caravans of 150 donkeys each, Barjamovic) and even 5000 (Stratford). It would appear that the first estimates are low. The two lists of declared value already refer to an estimated 108 and 348 donkeys. The size of a caravan may have been determined by the season, and a caravan like that of Imdi-ilum may not have been unusual for the first major one to leave in spring. The number of animals of this particular caravan (as reconstructed here) is not so different from the one referred to in a letter found at Mari, which refers to 300 Assyrians and 300 donkeys; from that group a section consisting of 30 men and 60 donkeys was separated.[78] According to another text from the Mari archives, a group of 50 donkeys and accompanying men travelled on to Kanesh whereas the rest of the caravan was held back by Asqur-Addu, ruler of Karana (A. 285, see MARI 8, 385–387). As noted by Veenhof,[79] the treaty between Assur and the magnates of Hahhum refers to the size of passing caravans as "fifty (or) a hundred loaded donkeys or more". The Assyrian caravans were then considerably larger than other known cases,

[75] Veenhof, VS 26, p. 29.

[76] Barjamovic 2018: 139–140.

[77] Kt c/k 401 (unp. Ankara) mentions as merchandise 6 talents 30 minas tin and 228 *kutānum*-textiles, which would be carried by an estimated 12 donkeys. The declared value is at least 14 talents 18 minas.

[78] ARM 26/2, 432: (3) *3* me lú-meš *aš-šu-ru-ú ù 3* me anše-hi-a *it-ti-šu-nu* (4) *iš-tu é-kál-la-tim*^{ki} *ú-ṣú-nim-ma a-na ka-ra-na*^{ki} (5) *iš-tu ka-ra-na-a*^{ki} *i-na* šà-ba lú-meš *šu-nu-ti* {TI-MA} (6) *30* lú-meš *ù 1 šu-ši* anše-hi-a *ip-ru-su-ni-im-ma* (7) *a-na an-da-ri-ig*^{ki} *ik-šu-d*[*u-nim* …].

[79] Veenhof 2008: 197.

such as that of a group of traders from Emar with thirty donkeys laden with oil,[80] or of 44 merchants with 29 donkeys carrying tin from Ešnunna.[81]

There will have been several caravans departing from Assur in a year, which makes one thousand animals per year a reasonable minimum number.

If we use the number of one thousand donkey-loads as an indication of the annual volume of trade during the heyday of the Level II period, this implies that there were sufficient quantities of tin, textiles, and donkeys (and men) available to equip these caravans. Since these commodities did not originate from Assur itself (with the exception of a small quantity of textiles, see below), it presupposes a high level of economic integration between the city-state and the regions supplying those goods.

In the following, the economic impact of the estimated one thousand donkey-loads a year will be reviewed; the following numbers have to be multiplied if a larger number should apply. The donkeys were bought in Assur, but their origin, sellers, let alone where they were bred or by whom are not mentioned. The price of a donkey varies and will have been due to the animal's quality and availability. If the price of a donkey is put at 16–20 shekels of silver, a thousand animals per year cost 16,000–20,000 shekels, that is about 133–167 kg of silver. Each donkey needed a harness (pack-saddle, bags, leather straps, ropes) which cost about 2½ shekels; this would make about 20 kg of silver. Some of the donkeys that survived the journey to Kanesh were sold for copper or silver in Anatolia.

The prices for textiles and tin varied considerably. A thousand donkey-loads could represent an annual 333 donkeys with tin and 667 with textiles. At 25 textiles (at 5 shekels a piece) per donkey this represents 16,675 textiles, which would have cost 692 kg of silver. A donkey-load of tin was 2 talents 10 minas, which at a price of 16 to 1 is about 1347 kg of silver.

Tin and textiles

The estimated quantities of tin and textiles transported to Anatolia and those of silver and gold which were brought to Assur are impressive. Yet, they only represent a fraction of the goods exchanged between Anatolia and Syria-Mesopotamia. The impact of three centuries of OA trade is hard to quantify but still a few comments can be made here. The tin may have come from Iran, where (now exhausted) deposits of this metal have been hypothesised. The evidence for the possible export to Mesopotamia of tin produced at the mines at Mušiston in Tajikistan, which were worked at about the same time, remains inconclusive.[82] There seems to have been a steady supply of this metal to Assur, passing through Susa (south-west Iran) and brought to Assur by caravans of the "Lower Country".[83] We do not know when Assur started to be a transit place for tin and textiles, but once a regular caravan trade had been established between Assur and the supplying towns or states

[80] ARM 27, 65: (14) *30* anše-hi-a *ša* lú-meš (15) *i-ma-ri-i* ì-giš *na-šu-ú* (letter from Qaṭṭunan).

[81] A. 16: (9) *29* anše-hi-a *ù 44* lú-meš *tám-ka-ru* (10) *ša an-na-ka-am na-šu ù iš-tu èš-nun-na*[ki] *il-li-ku-nim* = LAPO 18, no. 912.

[82] Garner 2014: 238; Garner 2015.

[83] Dercksen 2004: 29.

in Babylonia or Iran, Assur – apparently successfully – secured its position by blocking Babylonian competitors from crossing the Euphrates and participating in the Anatolian market. This need not have affected the total output of tin, but it caused a diversion of the main trading route into Anatolia and the polities profiting from it. We do not possess any evidence for the large-scale import of tin into Anatolia in the third millennium. Remains of ancient tin workings have been found in the Bolkardağ Mountains, but these tin deposits seem to have been exploited only during the third millennium.[84] Small deposits of tin-containing minerals exploited during the Bronze Age were recently identified at several places near Kayseri.[85] These local Anatolian sources obviously were unable to meet the total demand for tin. Warburton hypothesised that Anatolian producers of tin were unable to compete with the large-scale import of tin by Assyrian merchants, thus causing the closure of Anatolian tin mines at Bolkardağ.[86] Alternatively, the end to tin production at Göltepe may have formed the opportunity to import tin to Anatolia seized by Assur and not by Sippar or Ešnunna. It is likely that part of the tin was shipped to western Anatolia and even further by non-Assyrian traders.[87]

Wool and textiles

The bulk of the textiles imported into Anatolia were produced in southern Iraq, which was famous for the quality of the wool and for the textiles manufactured.[88] This made these "Akkadian" textiles desirable luxury goods against which the coarser Anatolian garments could not compete. Unfortunately, there is scarcely any evidence from Babylonia itself that relates to export-oriented production from this period; at best, one finds isolated references to types of textile also attested in the OA inventory and references to the sale of some textiles by merchants from Sippar. The OA trade made Assur a reliable market for selling goods. Dealing in textiles in Anatolia was a profitable business and demand in Assur must have been high. Together with the availability of Assyrian capital for purchases, it is very likely that this caused an increase in the output of textiles in several manufacturing places in Babylonia.

Yet, an increased supply of Babylonian textiles did not mean that the market in Assur was satisfied. There is evidence of Assyrian women engaging in the home production of textiles to be sold by male relatives in Anatolia.[89] The number of textiles made in this way (likely involving slave labour) would be around 2½ textiles per woman per year.[90] This caused a demand for wool, but the output of home-produced textiles to be exported to Anatolia during the 19th century (Level II period) is insufficient to explain the deliberate

[84] Yener 2000; Yener 2021.

[85] Yener et al. 2015.

[86] Warburton 2000: 82; Warburton 2003: 232.

[87] Earle 2015: 639. Evidence is growing that the tin traded in the Eastern Mediterranean area in the late second millennium originated from European mines, such as those in Cornwall, see Berger et al. 2019.

[88] For the assortment of textiles in OA trade, see Michel & Veenhof 2010.

[89] Veenhof 1972: 103–123; Michel & Veenhof 2010: 251; Michel 2016.

[90] Michel 2016: 132.

import of wool into Assur by local traders. Information about this type of import stems from evidence from Mari from about 1770 BC, which refers to Assyrian merchants buying wool from the Suhu region (east of Mari along the Euphrates), obviously meant for the production of textiles. Texts from Assur from about a century earlier, and contemporary with the data about home-produced textiles refer to wool of the Šurbu-type, referring to a breed of sheep named after a town south-east of Assur. This suggests a commercial interest in the acquisition of wool for the purpose of weaving it into textiles. With modest quantities needed for the export-oriented home-production, the main reason for the import of wool could have been to satisfy the domestic consumption in Assur. With an estimated 7000-10,000 inhabitants who received at least one textile a year or a wool ration of 4 pounds (in Ur III and Old Babylonian terms), the minimum demand would be 14,000–20,000 kg of wool or the yield of 14,000–20,000 sheep.[91] It remains unclear whether there was some institutional textile production in Assur itself.[92] Lines 21–29 of the letter TC 2, 7 read: "And if the market for Akkadian (textiles) has normalised, I shall buy (some) for about 1 pound of silver. As for the *kutānum*-textiles you keep writing to me: there is no Šurbu-wool. We will buy one heavy textile on the market and send that to you." This statement by a merchant in Assur describing the local market situation distinguishes between textiles imported from Babylonia (the Akkadian textiles), which we know were sold at the City Hall,[93] and textiles of *kutānum*-type that were woven with Šurbu-wool in Assur itself. This will hardly mean that all *kutānum*-textiles were made in Assur. In TC 2, 14, a quantity of 27 fine *kutānum*-textiles made of Šurbu-wool is purchased at 8.2 shekels of silver a piece (and 63 ordinary *kutānum*-textiles at 5.7 shekels each). Home-weaving (also) used Šurbu-wool, as in the text 'Rendell', where a single textile is mentioned.[94] It is impossible to say whether all textiles using this type of wool were made in Assur.

If the number of textiles imported each year from Babylonia is rounded off at 17,000, this would be the output of 6800 persons and be a fraction of the huge quantities produced during the Ur III period. However, details about textile production during the subsequent early Old Babylonian period are almost non-existent. Despite this lacuna in our information, it is certain that Babylonian caravans brought thousands of textiles to Assur, but the particulars of their origin and composition, the number of donkeys, or the textiles carried are not known. We do have isolated references from Sippar about individual merchants, such as *AbB* 12, 57, according to which a trader sold 50 textiles in the Suhu region. If representative of the organisation of trade, the modest number of textiles mentioned in an Old Babylonian merchant's archive from Sippar suggests that the textiles exported did not stem from large institutional weaving establishments, but rather from multiple, smaller workshops.[95]

[91] For rations, see Waetzoldt 1987: 125–126 (Ur III) and Stol 2004: 862 (Old Babylonian); for the yield per sheep, see Stol 2004: 959–960. At 2.5 minas per textile, this would result in 17,500–25,000 minas and the wool of 8750–12,500 sheep.

[92] Dercksen 2004: 15–16; Michel & Veenhof 2010: 213.

[93] According to Kt 92/k 432, published in Erol 2019: 799–800.

[94] For a translation of this text, see Michel 2020: 270 no. 167.

[95] De Boer 2021: 35, mentioning TIM 7, 108 listing in all about 178 textiles, that is 7 OA donkey-loads.

Taking advantage of opportunities to make more profit, Assyrian merchants started to trade in wool in Anatolia and occasionally even in locally produced *pirikannum*-textiles.[96] Although the Assyrian authorities tried to stop the latter activity since it threatened to jeopardize the sale of some of the imported garments, the inner-Anatolian trade in wool by Assyrian merchants is likely to have changed existing trade patterns and the volume and production of textiles.

Copper

The Pontic deposit in the Tokat area apparently formed a major source of copper for central Anatolia at the beginning of the second millennium BC, with the city of Durhumit functioning as a trading centre for this metal.[97] Some Assyrian firms sent their textiles and tin to Durhumit and adjacent regions to sell these commodities for copper. The metal obtained in this way was not the ultimate goal of the Assyrians, since overland transport and market prices in Anatolia made it too expensive to bring the copper to Assur, which was probably serviced by copper from Iran and possibly also from Oman via the South Mesopotamian trade with Dilmun.[98] Instead, the copper was transported to major Anatolian towns: Kanesh, Purušhattum, Wahšušana, and Wašhaniya, and sold for silver or gold there. Especially Purušhattum offered an attractive market for selling copper. For the Assyrians, this indirect sale of tin and textiles diversified the risk and offered the possibility of a larger profit. It is difficult to ascertain whether the Assyrians copied existing Anatolian exchange mechanisms and whether their activities drove out any Anatolian competitors.

In the absence of data on the total production and consumption of copper it is conceivable that prior to the appearance of Assyrian traders on the Anatolian market, the demand for copper was satisfied through palace-controlled trade employing local merchants. The most likely commodities which both palaces and local merchants had to offer in exchange for copper were locally produced textiles, and, depending on their accessibility, silver and gold. The Assyrian merchants revolutionised the textile trade in Anatolia: they brought highly valued textiles of a quality unavailable in Anatolia itself as well as tin and other luxury goods, possessed capital and commercial and technical infrastructure (although they often rented wagons from a local palace), and most importantly, they were neutral outsiders who were generally trusted by competing rulers. This will have made the Assyrians the preferred customers of the sellers of copper at the expense of their own regional commercial structures.

The output of copper may have increased as a result of growing towns in Anatolia, leading to a higher demand for copper, and Assyrian involvement. A larger output meant intensified exploitation of deposits and workforce during the mining season.

[96] Lassen 2010; Lassen 2014; Larsen 2017.

[97] For the evidence for OA trade in copper, see Dercksen 1996. The role of Durhumit as one the regional economic centres in Anatolia has been stressed in Barjamovic 2008. See also the conclusion in Türkekul 2001: 70–73.

[98] Hauptmann 1985; Laursen & Steinkeller 2017.

Silver and gold

With the information available on OA trade, we possess for the first time some detailed evidence on the quantities of silver and gold reaching Mesopotamia in a more or less regular way. The trade will have increased the quantity of silver that circulated in Mesopotamia. Most of the gold seems to have fallen into the hands of the city-state of Assur, which may have used it for paying for imported tin and for hoarding. The tin and textiles purchased in Assur were paid for in silver. The caravans bringing tin and textiles to Assur presumably received payment in silver or gold, but evidence for this is lacking. Gold was used to obtain tin in Elam according to some texts from Mari.[99]

4. What caused this growth?

Notwithstanding the incomplete nature of the documentary evidence, it is clear that the economic upsurge caused by the OA trade must have had a profound effect in various areas. The centuries of profitable trade led to an increase in material culture in Assur. This is visible in the archaeological record, with houses that were larger and better constructed than those of the preceding periods.[100] We know that part of the profits was used to buy property.[101] Royal building projects reflect the amount of money and resources kings were able to mobilise to construct or repair temples and city walls.[102] The father of Ilušuma, Šalim-ahum, built the Aššur temple; Ilušuma himself is known to have built the Ištar temple and a wall, and to have subdivided "house plots"; Erišum I rebuilt the Aššur temple, the Step gate (*mušlālum*), walls and the temple of Adad; Ikunum rebuilt the temple of Adad; Sargon I reportedly rebuilt the Ištar temple as well; Samsi-Addu used some of the capital available in the city for prestigious building projects: the Aššur temple, the Ištar temple D, and the so-called Old Palace. A different way of spending is attested for his son, Išme-Dagan, who is said to have offered 8 talents (240 kg) of silver as bridewealth to have his own son marry a princess.[103]

A letter sent to the Kanesh colony by authorities in Assur (TC 1, 1) makes us aware of how the city of Assur could siphon off part of the profits realised in Anatolia to cover extraordinary expenses. In this letter, the demand is made on the colony to send ten pounds of silver to co-finance the construction of the city wall.[104] A sum of ten pounds could easily be brought together by taxing all merchants, but here it is the central colony at Kanesh and the other trade settlements in Anatolia that have to collect it, probably out of their income largely consisting of taxes. In the south Babylonian kingdom of Larsa, the same sum apparently sufficed to hire 1800 persons for corvee work on a canal; the time is unspecified, but the one-third shekel of silver per person amounts to payment for 10 days.[105]

[99] Joannès 1991: 75.
[100] Miglus 1996: 55–56.
[101] Veenhof 2011: 225–228.
[102] See the overview in Larsen 1976: 63.
[103] Charpin 2003: 236.
[104] Dercksen 2004: 62–64.
[105] AbB 9, 217: "Speak to Lu-igisa: Thus says Nūr-Sin. Išar-kubi has written me about the corvée work of the canal Nubitar; in his words: 'Hire 1800 hirelings, so that they may be ready for you'. (This) he wrote

What led to this episode of growth and who benefitted from it? A rise in agricultural surplus seems unlikely, as the economy of Assur does not appear to rely on that sector. In fact, most of the barley consumed in the city may have been imported, which might explain why the City Hall had a special functionary for barley, the "barley-eponym". This would account for the fact that according to one text barley was bought in Ašal, a town north-east of Tell Rimah (ancient Qaṭṭara),[106] some 150 km from Assur. This may or may not be due to a famine in Assur itself, if we compare a letter to King Zimrilim of Mari according to which people from Ekallatum obtained barley from Karana;[107] in ARM 26/2, 411 barley from Razama seems to be brought to Ekallatum. Qaṭṭara, Karana, and Razama were situated in the same region, west of the Tigris. And Assur also lacked large flocks of sheep, as wool was also purchased.

This probable lack of an agricultural surplus contrasts sharply with the possibilities in Babylonia, where such a surplus could be and was transformed into silver: barley could be used to feed workers in weaving establishments who produced textiles that could be sold for silver through trade.

Assur may have experienced a rise in population and the eponym list contains a few individuals who are identified as originally non-Assyrian and who were in Assur when the trade already existed: REL 45 (ca. 1928) is Šu-Anum from Nerabtum, that is Išchali, a town located just east of the river Tigris, near Baghdad. REL 50 (ca. 1925) is another man called Šu-Anum, but he is identified as a *hapirum* "vagrant". Other eponyms or their fathers have a name that is unusual for an Assyrian, such as Bal-Tutu,[108] father of REL 59 (ca. 1914).

But what contributed most to this episode of economic growth seems to be a combination of several factors: the location of Assur itself and the related history of trade, the role of certain families and institutional reforms, and a relatively long period of peace.

The location of Assur was at or near trade routes and as a result it may be assumed that its inhabitants were accustomed to participating in trade. These routes connected Assur to its surrounding regions and we have to postulate that at a given moment it became possible to forward textiles to Anatolia and, perhaps at a different point in time, tin, because of existing communications and flow of goods, and because tin became one of the goods transported via this route, and a demand for tin arose in Anatolia.

me. Consider, and give 10 minas of silver, and hire (the) hirelings. And as long as you are free yourself, appoint anybody you want to go in front of the troops.", translation M. Stol. For the wages, see Stol 2004: 861.

[106] See MTT, at: https://books.openedition.org/cdf/4715, accessed 10-6-2021.

[107] ARM 26/2, 342, letter to Zimrilim from Yamṣum: "All the people of Numha of Ekallatum keep wandering about without barley. The troops are carrying barley from Karana, 660 litres each. The troops are (almost) dead. (…) I heard as follows around me: The chief of merchants of Assur brought a present to Asqur-Addu (i.e., the king of Karana), and the whole of Assur imposes its authority in Karana itself." (5) lú *nu-um-ha-a ka-lu-šu ša é-kál-la-t*[*im*]^{ki} (6) [*b*]*a-lum še-im it-ta-na-ag-*[*gi-i*]*š* (7) *ù še-am ša ka-ra-na-a*^{ki} *ṣa-*[*bu-um* …] (8) 2,1.0 gur-àm *i-z*[*a-ab*]*-bi-*[*lu*] (9) *ṣa-bu-um mi-i-i*[*t* …] (…) (15) *ù i-na a-hi-ti-i*[*a ki-a-am eš-me*](16) *um-ma-a-mi* lú ugula dam-gà[r ^{d}*a-šur*]^{ki} (17) *šu-ru-ub-tam a-na aš-kur-*^{d}im *ú-še-ri-ib* (18) *ù* ^{d}*a-šur*^{ki} *ka-lu-šu* (19) *i-na ka-ra-na-a-ma*^{ki} *uš-ta-*/[*a*]*l-la-aṭ* (transliteration according to ARCHIBAB, T7514).

[108] For Tutu in personal names, see Richter 2014: 242.

The opportunities offered by these conditions were recognised in Assur. But the town as such cannot be used to explain economic growth. Rather, as argued by Abrams, the town is what has to be explained – in our case, we are curious what made Assur such a successful mercantile centre.[109] Abrams introduces what he terms the complex of domination to analyse towns. This complex comprises "an ongoing and at least loosely integrated struggle to constitute and elaborate power. The conception has a certain dynamism, and it points directly towards the analysis of social action and relationships and to the construction and destruction of institutions through action and relationships". The struggle for power between merchant families and the crown has already been discussed by Larsen (1976), who successfully adduced evidence on Italian mercantile towns to explain developments in Assur. This is indeed a valuable comparison and it explains how an oligarchy consisting of merchant families gained influence in Assur and exercised power through the city assembly and the 'elders'. So it was human agency that created institutional change: the roles of kings Ilušuma and notably Erišum I have been described above, and merchants gained influence. Erišum's reign saw the introduction of the office of year-eponym and probably the beginning of permanent settlement in Kanesh and other towns in Anatolia. The groups forming this city-state created legal and financial institutions to deal with the complexities of trade, notably by concluding treaties with foreign rulers through which the unhindered passage of caravans, and the protection of Assyrian lives and property was negotiated. Other examples are the formation of joint-stock partnerships (*naruqqum*-contracts), and the introduction of laws to deal with novel situations (e.g., the introduction of the *rābiṣum*-attorney).

As a result, the trade led to increased output by all those Assyrians involved in the caravan trade: suppliers of donkeys, of wooden, woollen and leather equipment, food, and labour. It also created or enlarged opportunities for local families to earn from the trade by weaving textiles or buying export goods (as was done by kings and priests). In Babylonia, the export-oriented production of textiles received a boost although practically no documentation has survived to substantiate this. Along the caravan routes, the traffic with its demand for food, lodgings, and services, and the income from taxation, led to greater local and regional prosperity.

The role of money needs to be addressed here. We know that the OA economy used copper and silver as money.[110] As we have seen above, the flow of silver and gold enabled the Assyrian merchants to purchase the goods in Assur. As soon as the system functioned as it did during the well-documented decades in the early 19th century, a considerable part of the profit realised in Anatolia was used to buy merchandise. This can be regarded as the investing of savings in productive capital according to theories of economic growth. The purchase of property in Assur was not investment, since house prices there were high, and the houses bought were not sold again at a profitable price or rented out. So the reinvestment of profits in merchandise caused a larger volume of traded goods and, related to that, more work for all those involved.

[109] Abrams 1978: 30–31.
[110] See Dercksen 2021.

Did this lead to a higher per capita income? This question can only and with due caution be answered for the merchants. Several, but certainly not all of the Assyrian traders, became rich. Their wealth was displayed in Assur, visible to anyone by the frequency of donkeys carrying silver that entered through the city-gate, and it supported or even heightened their social credit and (political) influence. For some, their wealth may have been hidden from sight and out of reach of their families in Assur, because they invested nearly all of it in merchandise. The huge sums of silver value brought together in the joint-stock partnerships (*naruqqum*), 112 and 120 pounds of silver according to two sources (see above), were meant for long-term investments (ten years and longer). This makes it difficult to compare these to the amounts of silver that were used for trading enterprises of limited duration in the Old Babylonian period. Nevertheless, if we look at the evidence, we find there as the highest amount of silver mentioned for a commercial partnership a sum of 26 pounds of silver (20 pounds partnership money, 6 pounds *tadmiqtum*), which was borrowed by two persons from divine Šamaš and one of the partners in Larsa for a trade journey (text YOS 8, 145, date: Rim-Sîn 38, ca. 1785 BC). The next highest sum occurs in a text from Sippar dating to the reign of Apil-Sîn of Babylon, which mentions a capital of 12 pounds of silver (two-thirds invested by I-S, one-third by I.) for a trade journey to Larsa (BM 16470, courtesy S. A. Moore). A capital of 6 pounds of gold sold for over 32 pounds of silver seems to be used to buy tin in Susa according to TIM 1, 20.[111] These figures suggest that Old Babylonian merchants operated with smaller amounts of silver than their colleagues from Assur. It is striking that the volume of trade within one year of an Assyrian trader who was stationed in Sippar around 1750 BC, is estimated to have amounted to at least 20 pounds of silver,[112] which for a contemporary colleague in Kanesh would amount to the sale of about 60 textiles. Whether the turnover of this Assyrian's business in Sippar was representative of what Sippar traders had, is uncertain.

There exists some evidence on the cost of living in Assur and in Kanesh:[113] two women are to receive 1½ pounds of silver a year in Assur, that is 3¾ shekels of silver each per month or one-eighth of a shekel (22½ še) per day. A man hired as an attorney received about 7 shekels of silver (2 shekels of silver and 30 litres of wheat) per month, presumably in Kanesh. A priestess living in Kanesh was to receive 1⅔ shekels of silver per month, but received food from the owner of the house she lived in (if correctly interpreted). It is not known what an ordinary hireling received; in Old Babylonian times, his wage was 1 shekel of silver per month.[114] We may suspect that in this respect there was no big difference between Assur and Sippar. The difference seems to have been in the wealth of Assyrian merchants trading with Kanesh.

The factors causing the end of this trade system were apparently political (an end to a period of stability, wars and the ensuing destruction of key towns) and intrinsic to the system (organisation and financing of trade, the character of colonial settlements). Fluctuations or more severe changes in the supply of tin and other commodities are also a likely

[111] See Reiter 1997: 90*–99*.
[112] Veenhof 1991: 301.
[113] See Dercksen 2014: 97–99.
[114] Stol 2004: 861.

cause. Yet, despite all these interruptions tin was still available in the city of Assur sometime in the mid-17th century BC according to a letter found in Haradum (east of Mari on the Euphrates).[115] But by that time, Kanesh and its Assyrian colony had ceased to exist.

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[115] Joannès 2006: 112–113 no. 65.

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