A comparative historical analysis of ancient trade economies in the Fertile Crescent

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DECLARATION

I hereby declare that the mini-dissertation submitted herewith to the North-West University in partial fulfilment of the requirements for the Master of Business Administration (MBA) degree is my own original work. It has been text-edited in accordance with professional communication standards and has not been previously submitted to any other institution for evaluation purposes.

Juléhan Strauss

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28 November 2025

DEDICATION

I dedicate this work, and all its accompanying labours, to my ever-present and loving wife, and to the future we are both striving for.

PREFACE

As I submit this mini-dissertation for examination in November 2025, I reflect on a journey that began with a fascination for how ancient human behaviours could illuminate current day economic debates, especially in an era marked by polarised views on systems ranging from free-market capitalism to state-controlled alternatives like socialism and communism. This work, titled *A comparative historical analysis of ancient trade economies in the Fertile Crescent*, emerged from my engagement with the Master of Business Administration (MBA) programme at the North-West University. Here, I sought to explore whether historical and anthropological evidence reveals an innate human propensity for trade and cooperation as foundational to economic organisation. Rather than appealing to current day tribalistic politics, perhaps our natural history can be a better arbiter?

The idea for this study came to me during discussions on ideological divides in economic discourse, often amplified and distorted by media and political narratives. By focusing on the Fertile Crescent through a comparative historical analysis (CHA), I aimed to contribute unbiased insights that draw from prehistoric obsidian dispersal and speech-trade coevolution. The progression from Neolithic surplus production in Natufian societies, to urban hybrid models in Mesopotamia that contrasted significantly with centralised structures found in Old Kingdom Egypt, highlights many strengths and weaknesses of the economic systems that governed them. This progression underscored adaptive hybrid systems that balanced individual agency and collective governance.

Completing this mini-dissertation amid the demands of professional and personal commitments was very challenging, exhausting, stressful, but rewarding. I extend sincere gratitude to my supervisor, Ms. T. Msimanga, for her insightful guidance and encouragement throughout the process. Her feedback sharpened the structure, flow, and ties to the central research question, which ensured the work remained focused on how early trade can inform today's economic discourse. I also thank all the professors and lecturers at the NWU Business School, and all the research and administrative staff for supporting me throughout the last two years.

This project can be of use to those seeking nuanced perspectives in economic organisation. It reminds us that human propensities for trade and cooperation (evident across millennia) offer timeless lessons for fostering resilient and adaptive systems in our interconnected, fast-paced, and politically-charged world.

Juléhan Strauss - November 2025

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ABSTRACT

This mini-dissertation conducts a comparative historical analysis of ancient trade economies in the Fertile Crescent and evaluates whether early trade behaviours reflect an innate human propensity for trade and cooperation as a species-level trait. If so, these findings will have significant implications for contemporary economic discourse. Drawing on secondary historical and anthropological sources, it first examines the evolution from prehistoric exchanges (around 130,000 BC) marked by widespread obsidian dispersal and the coevolution of speech for inter-group negotiations. Then, Neolithic transitions (12,000–10,000 BC) that enable surplus production, property ownership, and division of labour in Natufian societies are discussed. Finally, the analysis culminates in looking at urban developments (around 5000–3000 BC), to compare Mesopotamia's hybrid state-private systems with Egypt's centralized pharaonic model, which (among other factors) faced instability and economic pressures influenced by decentralization.

Findings suggest a plausible intrinsic propensity for trade, favouring adaptive hybrid arrangements that balance principled individual agency with light-handed governance instead of rigid extremes. Limitations of the study include fragmentary prehistoric data (primarily section 2.1) and interpretive biases in secondary sources (primarily sections 2.2 and 2.3). For policy makers, these insights advocate hybrid policies blending private enterprise with light regulation to foster sustainable resilience.

KEY TERMS

Agricultural revolution – Also known as the Neolithic Revolution, and which refers to the start of a transition from a predominantly hunter-gatherer society to a sedentary surplus-generating society.

Agricultural revolution – also referred to as the Neolithic Revolution so as to avoid confusion with other agricultural revolutions. This refers to a significant economic and agricultural revolution experienced by many cultures across the world, with prominent examples including the Fertile Crescent cultures in the Middle East (Wallenfeldt, J., 2025a).

Centralisation – Top-down, heavily controlled structures of organisation. Emphasises state control.

Comparative historical analysis (CHA) – A methodological approach that examines similarities and differences across historical contexts to draw insights.

Decentralisation – Bottom-up, heavily democratised structure of organisation. Emphasises individual control.

Fertile Crescent – A crescent-shaped region of the Middle-East, best known for its early agricultural successes.

Free market system – a type of economic system that is primarily controlled by the market forces of supply and demand, rather than by a central government (Loo, 2025).

Hunter-gatherer – an individual or a group of individuals who depend primarily on wild foods for survival (Augustyn, A., 2025).

Hybrid economic systems – Flexible organisational systems that allow for significant individual freedoms in addition to light regulatory oversight from the state.

Mesopotamia – Ancient region between the Tigris and Euphrates rivers in the Fertile Crescent from around 3500 BC onward.

Natufian culture – Prehistoric hunter-gatherer society from the Levant around 15,000 – 11,500 years ago.

Obsidian – Volcanic glass often used in the production of prehistoric tools; wide dispersals of these tools have been found.

Old Kingdom Egypt – Egypt around 2543 – 2120 BC.

Relational anthropology – A view of economic interactions embedded in social relationships.

Surplus – An excess of goods kept as a store of value that can be utilised later.

Traditional economy – Subsistence-based systems enduring from the Neolithic era.

Urbanisation – Population concentration in cities.

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1. CHAPTER 1: INTRODUCTION AND BACKGROUND

In an era that is saturated with intense ideologically-charged debates over economic systems from around the world, this mini-dissertation seeks to contribute towards this discussion through a focused historical perspective by conducting a comparative historical analyse (CHA) that evaluates ancient trade economies in the Fertile Crescent and Egypt. This analysis seeks to identify any potential propensities for cooperation and trade that may date back as far as 300,000 years ago (Hublin *et al*., 2017:291), and hopes to contribute towards contemporary discourse surrounding economic policy. By showcasing how early economic practices and systems functioned in antiquity, it may reflect foundational human tendencies rather than modern political constructs or norms.

While this historical comparative study will make use of anthropological- and archaeological sources to identify and illustrate ancient forms of trade and economics, it is important to note that this mini-dissertation is primarily focused on economic systems and does not intend to delve too deeply into the anthropological and archaeological fields.

This mini-dissertation's literature review consists of 3 main sections. Section 2.1 explores some of the earliest traces of human trade and cooperation, and how speech and social cohesion facilitated a species-wide boom in the Fertile Crescent while other, more robust, human species went extinct (Hublin *et al*., 2017:289). Essentially, some specialists believe that trading as a social mechanism may be as intrinsic to us as the ability to speak and form structured languages (Horan *et al*., 2008:294). While these findings cannot provide absolute clarity on early human behaviour due to the inconclusiveness of these ancient traces of history, there is enough evidence for us to ask valuable questions surrounding social cohesion and their resultant trade behaviours. This section is the oldest part of the study's time horizon and serves as the foundation for the following sections to build upon.

Section 2.2 is the first truly analytical section of this project's literature review. The agricultural revolution (also known as the Neolithic Revolution) took place around 10,000 BC in the Fertile Crescent of the Middle East (Bar-Yosef, 1998:159), and agriculture is often touted as one of the first industries of humanity. It allowed for the exchange of food items on an unprecedented scale and grain often served as a pseudo currency. Traditional economies and command economies were common during this time period and persist up to present day (Mamedov *et al*., 2016:63); they can be compared to those of contemporary rural communities such as Canada's Inuit people (Ready & Power, 2018:74). To remain within the scope of a mini-dissertation, this analysis will remain focused on the Fertile Crescent as its background is relatively well-documented.

The third and final analytical component of the mini-dissertation's literature review (section 2.3) will discuss how the Neolithic Period saw an unprecedented advancement regarding human survival and prosperity (Algaze, 2018:13). Permanent dwellings and villages led to the rise of cities and property ownership, drastic departures from humanity's hunter-gatherer heritage, which even led to climbing mortality rates due to poor sanitation and the spread of disease (Algaze, 2018:2-5). However, these cities enhanced our ability to exchange goods (Algaze, 2018:23), create permanent shelter from predators and the elements, and, through necessity, oversaw the rise of government structures and elite classes (Algaze, 2018:20).

By the end of this study, the four main research questions should find answers in the concluding 'Discussion of the Results' section, and consequent insights will be weighed and discussed in the hopes of adding to modern discourse surrounding economic practice.

1.1 PROBLEM STATEMENT

For the sake of a qualitative study, the context for the research problem is centred on economic systems employed by the free-trading world. While a full dissertation might explore numerous nations and contexts, Ancient Egypt and the Fertile Crescent region were chosen as the foreground of this mini-dissertation due to their early examples of urbanisation (Lee, 2025), and their chronological placement in our human development timeline (Mark, 2022).

The study will determine the measurable merits of free market systems from a historical and anthropological perspective. While cultural and social matters often run parallel with these fields, this study is not intended to provide a foreground for current-day social and ideological discussions. The study will acknowledge the role that historical cultures and social matters played within the selected economies, but purely from an economic and historical point of view.

1.2 CAUSAL FACTORS

The Corporate Governance module (along with aspects of the Executive Economics module) of the NWU Business School's MBA programme exposed the instances of harmonious trade (e.g., trading block agreements like the African Continental Free Trade Area) as well as instances of disharmonious trade (e.g., corporate corruption, poor governance, stakeholder exploitation, etc.). This led to the question of where and when these harmonies and disharmonies first appeared, in the hopes of identifying potential inflection points in our economic history that may explain some of our modern-day economic challenges.

1.3 THE SPECIFIC PROBLEM

The specific problem that this study is investigating is the growing systematic disconnect surrounding economic practices in today's global economy, by applying potential societal lessons learned from earlier economic practices from our shared human past. If this disconnect is left unchecked, or left to expand further, this can potentially lead to significant operational divides (often exploited by malicious idealogues) as workforces continue to be polarised against one another, which in turn causes more potential for human conflict while presenting further organisational pressures for the given corporation. When weighing this modern social disharmony against our shared past, this contrasts significantly from our ancient ancestors who heavily relied on social cohesion and communication to overcome life-threatening dangers and unfamiliarites when (for example) some of us migrated out of Africa around 100,000 – 50,000 years ago (Horan *et al*., 2008:295). This reliance on social cohesion was key to us outlasting (and surpassing) other human species far more robust than ourselves as Homo sapiens (Degioanni *et al*., 2019:2). If the Homo sapiens' ability to form social relationships and trade networks laid the foundation for all future human endeavours and achievements, the idea of continued social- and ideological polarisation is a direct affront to a species-level characteristic of humanity, and can potentially pose an existential risk to our species if left unaddressed and unchecked; echoing a fate similar to those of the Neanderthals who were, in some technological ways, equally as advanced as Homo sapiens but far more socially isolated, and vulnerable as a result (Weaver, 2009:16032).

Over-simplifying mysterious facets of human existence greatly endangers our ability to have nuanced discussions surrounding the facets of humanity that helped shape us as a species. This historical comparative review aims to evaluate ancient trading systems from a species point of view, rather than through an ideological lens which, according to Frieden (2020), is commonplace in political economics debates. This same ubiquity of ideological debates shows a lack of historical consideration for economics and how we inherited these scientific (but also socially-driven) systems. Addressing this gap will aid our understanding of the origins of land ownership, interest on loans, capital management, and the relationship between private and public sectors, which helps us identify systems that were favoured by earlier humans, while exploring why systems that did not survive to modernity may (or may not) be worth reimplementing in the current era.

On the one hand, successful participants in each economic context are often opposed to being taxed more in order to subsidise others solely because they are more successful. On the other hand, special-interest groups seem to play a disproportionate role in the world today, regardless of democratic context (Frieden, 2020). These observations are further corroborated by the graph below:

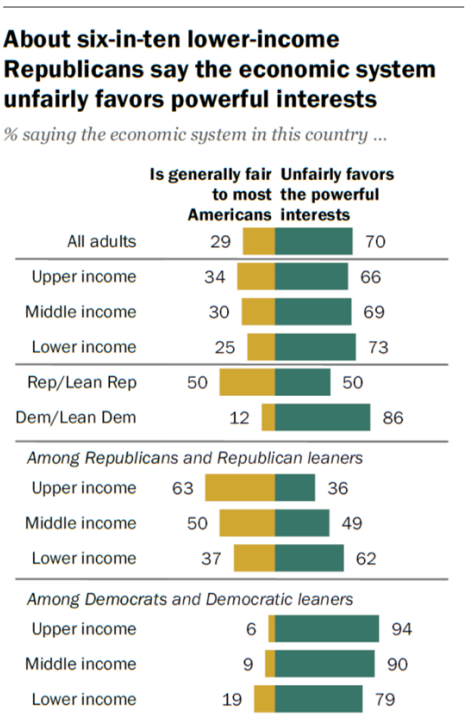

Figure 1.1: Republican and Democrat perceptions surrounding U.S. economic system (Igielnik, 2020)

Perceptions like this show how something as foundationally important as economic autonomy can be heavily politicised and reduced to demarcated ideological "tribes". On the whole, the survey indicates that lower-income participants feel that they are disadvantaged as a result of disproportionate powers and privileges (Igielnik, 2020). While there is potential for a survey such as this to provide valuable insight, the political landscape that it operates in disrupts the possibility of reaching a truthful and methodologically sound conclusion. This study is intended to be framed independently from these ideologies in an attempt to reach consensus without contributing to the ongoing disputes based on political ideologies. If successful, this study will be free from ideological leanings which will make it digestible to all readers regardless of political or ideological standing.

The importance of this type of study can be found in the fact that the world's most powerful economic countries are ideologically divided through their politics, which is a representation of those nations' voters and their beliefs. As we've seen earlier, this difference in ideology often extends to the economic state as well. It is the researcher's view that discourse surrounding national and international economic systems is foundational for civilisation and should be encouraged. However, without a minimum level of agreement surrounding the methodologies of a nation's economy, a nation (or trade area) is set up for serious disagreements and threats to international and domestic stability. While partisan politics are not new or exclusive to specific nations, increased partisanship can lead to rising policy uncertainty, which impacts many

components of an economy, such as consumer spending, hiring, investment, and overall economic growth (Azzimonti, 2023). This impact is exacerbated further as emerging data suggests that finance professionals (regardless of their residence) are becoming more likely to invest in a country based on the political leanings of the target country's political dispensation (Stropoli, 2021). When political divides widen, banks tend to reduce their lending volume to the target country by 21% on average, in addition to a 9% reduction in the total number of loans issued (Stropoli, 2021). That instability then splashes downward and has both direct and indirect impacts on the everyday life of citizens, which affects everyday factors such as consumer lending, social programmes, climate change protocols, workers' rights, sustainability concerns, and good governance.

1.4 PRACTICAL CONTRIBUTION TO MANAGERS AND POLICYMAKERS

Managers who read this study will see how ancient our propensity for cooperation and trade really is. This propensity has not left us, but our tools for facilitating this cooperation and trade have developed exponentially. Managers who are aware of this shared history with all humans may achieve a greater level of empathy as leaders in their organisations, while it will also help them add to their economic world views.

Policymakers who read this study will learn how the human propensity for cooperation and trade is a key characteristic that helped our species reach its current heights. Thus, when discussions surrounding economic systems occur, they will be less likely to veer towards one extreme or the other regarding the optimal economic organisation of society.

In essence, this study provides policymakers with an unexpected perspective surrounding human prosperity and cooperation, and how the two are linked.

1.5 RESEARCH QUESTIONS

1.5.1. Primary research question

How do the earliest forms of trade and cooperation among ancient societies inform modern approaches to economic cooperation and social cohesion?

1.5.2. Secondary research questions

The secondary research questions aim to examine historical evidence that suggests free trade practices reflect fundamental human tendencies towards cooperation and social organisation, rather than being purely ideological choices.

1) Is there historical or anthropological evidence for humans favouring any particular economic practice as a core component in organising their earliest successful societies?

2) When and how did early societies in the Fertile Crescent trade goods?

3) What impact did these early forms of trade have on the social organisation of the Fertile Crescent and Egypt, in terms of collaboration and growth?

4) How do these ancient systems differ from modern-day systems?

These secondary questions will assist in reaching the primary objective of the study, as they consider multiple perspectives and metrics to address the primary objective.

1.6 THE LITERATURE REVIEW

This study will consider three key points in human history; namely, early human development (i.e., prehistoric), the Neolithic period (i.e., 10 000 BC), and the rise of Egypt (5000 BC – 30 BC).

According to Wong & Hendry (2025), human progression did not follow a linear path, but instead took place through a series of branching family trees that stretched across various continents and time periods. Our development as a species can be traced back as far as 7 000 000 years ago with the advent of early hominins such as the Ardipithecus Ramidus, Ardipithecus Kadabba, and Sahelanthropus Tchadensis (Wong and Hendry, 2025). Our relation to these early hominins, in addition to others, is best illustrated below:

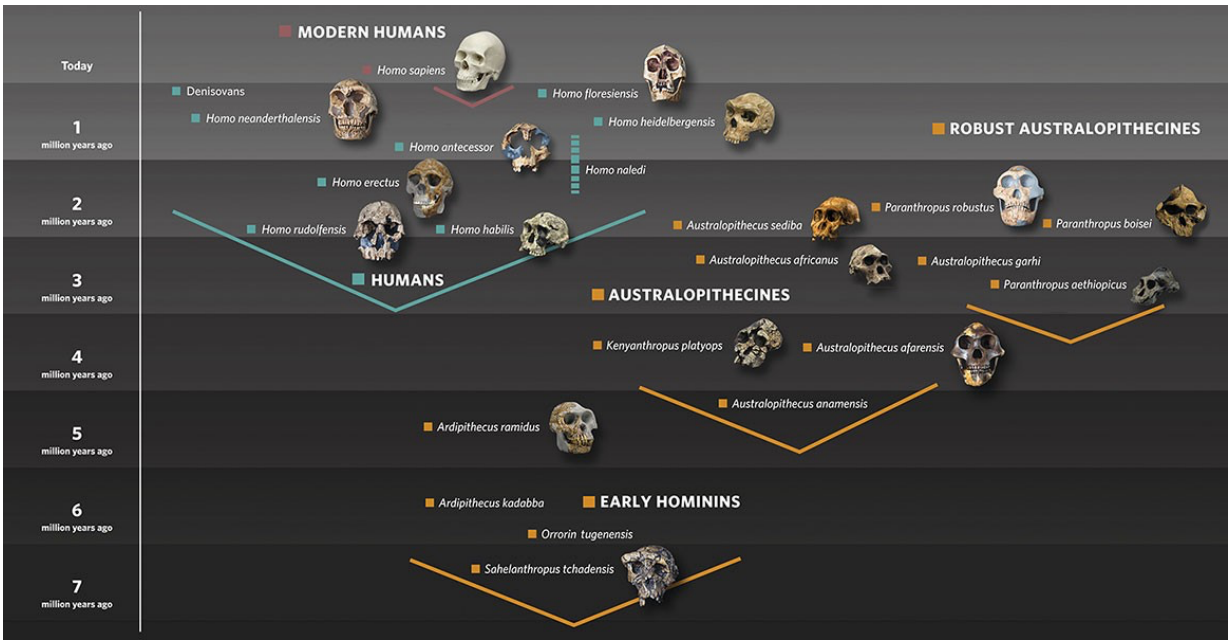

Figure 1.2: The Natural History Museum's human family tree (Wong and Hendry, 2025).

This figure shows how ancient our lineage is as a species, but, at the same time, how recently our trade behaviours developed from a modern human perspective. As will be made clear in later sections of this proposal, trading behaviours are debated as being hundreds of thousands of years old, while our early human ancestry stretches back millions of years.

As the historical starting point of the study, discussions surrounding early human ancestors will be possible thanks to a robust body of literature in anthropology and palaeontology. Ongoing debates regarding the diets of early humans (Roebroeks, 2007:18), the ability to use and control fire (Huang *et al*., 2022:2), and the suggested developmental stresses identified in dentures that suggest disproportionate hardship for our ancestors in specific regions (Skinner, 2019:5), are all sources that can aid the contextual component of the study's early sections. According to Schulz (2022:8), humans are cognitively unique and are standouts with regards to their propensity for trade, and there are very early examples of this propensity. While other animal species like dogs also exhibit egoism, not too unlike human egoism, a key difference is found in how we see other members of our species as also having their own interests, which is an essential precondition for mutually beneficial exchanges (Schulz, 2022:8). Additionally, Schulz (2022:8) posits that, to understand the origins of human trade, we can draw much from our living relatives such as chimpanzees, orangutans, and bonobos. These species show evidence of a basic understanding of property (exhibited through territorial behaviour, as well as primitive exchanges of grooming for foodstuffs); due to our shared lineage with great apes, it is reasonable to suggest that our trading habits potentially began (albeit, primitively) since before we were modern humans (Schulz, 2022:8).

The literature surrounding early humans and their development is well populated, and still in debate regarding many unsolved inquiries. It is also noted in the "Limitations of the study" section that, despite the expansive literature, there are many indeterminable variables that have yet to be resolved or simply cannot be resolved. To at least mitigate this shortcoming, this study will use this chapter on human development to frame the mini-dissertation and set its tone, but will not use it to serve as a core discussion for stating decisive arguments or conclusions. Sections 2.2 and 2.3 will be more robust in terms of real-world parallels and will directly address the study's research objectives.

The Neolithic period is known as the final stage of the Stone Age which was characterised by our ancestors' use of stone tools that were shaped with polishing and grinding (Wallenfeldt, J., 2025a). This was also when our ancestors began to rely on domesticated plants and animals and erect permanent dwellings rather than live as nomadic hunter-gatherers, as during previous periods (Augustyn, A., 2025). The exact starting point for this period is still debated amongst

scholars, but the general consensus is around the 10 000 BC mark, characterised by the agricultural revolution (Wallenfeldt, J., 2025a). This revolution altered the fundamental way in which humans interacted with the world, as the environmental pressure for acquiring sustenance was greatly diminished due to human mastery of animal husbandry and raising crops, far more reliable than the hunter-gatherer and nomadic ways of earlier humans (Augustyn, A., 2025).

However, scholars like Svizzero (2014:27) suggest that the pre-Neolithic economy was more similar to the Neolithic economy than is popularly believed. During the transition period from pre-Neolithic to Neolithic, which took place around 5000 to 12 000 years ago, a mixed economy consisting of traditional hunter-gatherers as well as the early farmers existed. Additionally, sedentism is closely linked to agriculture, but there is evidence that some of our non-farming ancestors also took up permanent dwellings, as is witnessed by settlements like the Natufians in the Jordanian Valley (part of the Fertile Crescent) and the Jomon culture from North Japan (Svizzero, 2014:3). As permanent dwellings imply an ingrained concept of private property or, at least, claimed territory, these non-farming sedentary communities offer some examples of the earliest homeowners in human history.

Atakuman (2014a:3) explores social transformations during the Neolithic period and makes a distinction between the Pre-Pottery Neolithic A period (PPNA) dated around 10 000 – 8500 BC and the Pre-Pottery Neolithic B period (PPNB) dated around 8500-7000 BC. For most of the PPNA and the PPNB, the hunter-gatherer mode of survival was still dominant, and the first examples of self-sustaining agricultural packages came into being near the end of the PPNB period (Atakuman, 2014a:3). While this study focuses on the Fertile Crescent found in the Middle East, it is remarkable how agricultural advancements developed independently across the world at a similar time in history (Atakuman, 2014a:2). Fuller and Lucas (2025:74) attribute the varying levels of scale and success to the various social and ecological contexts that independent cultures had to face. Access to proto-domesticates, population densities, resource abundance, processing and harvesting technology, social structures, storage systems, and sedentary practices are all examples of variables that significantly impact a culture’s ability to engage with agriculture (Atakuman, 2014a:2). These domestication technologies spread very quickly throughout the Fertile Crescent by means of uneven movements across the region at various different times (Zeder, 2011:222).

The earliest known Neolithic cultures that inhabited Egypt date back to around 5000 – 4000 BC and were found at Marimda Banī Salāma near the southwestern edge of the Nile delta, and at Al-Fayyūm located in the southeastern part of the governorate (Samuel & Baines, 2025). Evidence of fishing and cereal grain cultivation has been uncovered near the shores of Lake Qārūn (also

known as Lake Moeris) which indicates that the predynastic Egyptians were participants in the agricultural revolution (Samuel & Baines, 2025). Due to Egypt's long-lived survival as a civilisation, it can be divided into numerous distinct developmental periods that include the following:

- **Predynastic:** 5000 – 4000 BC
- **Early Dynastic:** 2900 – 2544 BC
- **The Old Kingdom:** 2543 – 2120 BC
- **The Middle Kingdom:** 1980-1760 BC
- **The New Kingdom:** 1539 – 1077 BC
- **Egypt from the Third Intermediate Period:** 1076 – 723 BC
- **Macedonian and Ptolemaic Egypt:** 332 – 30 BC
- **Roman and Byzantine Egypt:** 30 BC – 642 AD (Samuel & Baines, 2025)

To remain within the scope of a mini-dissertation, this study will place emphasis on the older periods of ancient Egypt so as to support the research questions surrounding the earliest examples of free trade and the impact of this free trade on the societies involved.

Mohammad & Mohammad (2021;137) view bureaucracy and administration as parameters for statehood in predynastic Egypt, being regarded as rational apparatuses for exercising administrative authority and control. The use of several different types of clay stamps is further evidence of an administrative method to order and allocate certain goods, and to record these exchange events (Beuthe, 2016:165). Older uses of this technology were discovered in Mesopotamia; it is broadly believed that the technology migrated southward into Egypt from Mesopotamia (Mohammad & Mohammad, 2021:138). In fact, researchers tend to agree that the first glyptics in Egypt were imported from Greater Mesopotamia (Honoré, 2007:33). These stamps and seals often bore numerous fingerprints, geometric, zoomorphic, and hieroglyphic impressions on them, and were primarily attached to door bolts, vessels, knots, cords, bags, and baskets (Mohammad & Mohammad, 2021:137). The use of these seals and associated tokens with specific etchings and markings implies a need to keep track of stock, which is closely linked to commercial activities. This led to the development of proto-hieroglyphics regarding an abstract mathematics system (Mohammad & Mohammad, 2021:148).

For most of its history, Egypt engaged in trade through a barter system without a trading currency (Mark, 2017). However, despite the lack of a universal coin or token, the Egyptians employed a unit of value known as a *deben,* which functioned similarly to a national currency but represented 90 grams of copper or (for more expensive items) silver or gold (Mark, 2017). In a modern context,

we would be carrying a wallet or bank card loaded with *debens*, but in the ancient Egyptian context, items and services had a *deben* value, and could easily be bartered and exchanged between one another for equivalent *deben* value (Mark, 2017). This amicable exchange of value between individuals proved to be a precursor for the development of an early state, as this shows a voluntary (or otherwise) drive to cooperate (Bard, 2016:4). This practice, in principle, is reminiscent of modern units of value such as those in share trading, crypto currency, and even the US dollar when it was still pegged to the value of gold (from the 1870s to 1971).

1.7 RESEARCH PARADIGM, METHODS, AND METHODOLOGIES

1.8.1. Pragmatism paradigm

According to Elgeddawy and Abouraia (2024), pragmatist researchers seek knowledge where mankind interacts with its environment. As such, the knowledge is ever-changing, dynamic, developing, and considers the consequences of human nature (Elgeddawy & Abouraia, 2024:71). As this study considers cultures at various developmental stages, it is a valuable methodology to employ. Some statements and findings may resemble the positivist paradigm by presenting a particular objective reality of a given tribe or culture (e.g. species-level traits), while other findings may hint towards constructivism (e.g. human ingenuity and languages development as a response to their experiences and natural environments). However, a predominantly pragmatic approach allows the researcher to interpret dynamic historical patterns for insight, rather than generalising findings or testing hypotheses.

1.8.2. Research approach

This study incorporates an inductive research method because of the qualitative nature of the study, in addition to the study's reliance on historical findings and data. This technical analysis is explorative in nature and requires the researcher to understand the various perspectives and lived experiences of various ancient cultures (Azungah, 2015).

Furthermore, according to Alyaqoub *et al.* (2024), inductive reasoning is considered an essential approach for generating insights and gaining an understanding of different phenomena in an in-depth manner, making this method a natural fit for qualitative research.

1.8.3. Nature of data to be assessed

This study considers historical and archival sources to measure the economic systems adopted by our earliest ancestors. A varied and emphatic lens is required to consider the systematic and axiomatic nuances of those same ancestors. This historical approach complements the

methodological structure and aims of the study due to the wealth of archival knowledge surrounding ancient cultures found in databases like Web of Science, ScienceDirect, Scopus, JSTOR, DOAJ, and PsycINFO. Much of this knowledge is in a data format, but more insight can be gleaned when viewing the selected cases qualitatively, especially when culture, human relations, and economic habits are concerned.

The nature and sources of the data for this mini-dissertation primarily consist of secondary sources such as academic literature on ancient economies (e.g., scholarly books, peer-reviewed journal articles, historical analyses, etc.), and archived documents (e.g., translated ancient texts, archaeological reports, inscriptions from reputable databases, etc.). These sources have been curated based on their relevance to the historical time periods stipulated in the proposal to ensure a focus on credible, peer-reviewed information that is as primary-derived as possible.

1.8.4. Methodological choice

This study employs a comparative historical analysis (CHA) framework, which is a methodological approach that is often used within social sciences and economic history, which combines historical comparisons with in-depth historical investigations to identify larger scale themes, potential causal mechanisms, and processes that occur over certain periods of time.

When analysing the data and literature, a comparative analysis (through a historical lens) is undertaken, which involves the systematic coding and categorisation of key themes from the selected sources. These themes include trade mechanisms, resource allocation, and social impacts as they existed in the Fertile Crescent and in Egypt. This analysis endeavours to identify recurring motifs, contradictions, and innovations in these early free market systems, and to cross check these findings across multiple sources. As this mini-dissertation makes use of a pragmatist lens, the study allows for a greater range of interpretations without the need for rigid hypothesis testing.

1.8.5. Research design

This mini-dissertation is embedded in a historical comparative review design consisting of one introductory section (2.1), and two analytical chapters (2.2 and 2.3). According to Bryman, Bell, & Hirschsohn (2021:111), qualitative studies that incorporate documents and other artifacts from specific organisations and industries form part of a historiography. As this study relies heavily on comparisons from ancient civilisations, this is a natural starting point for the study.

This study focuses on ancient trade in the Fertile Crescent and in ancient Egypt to evaluate the importance or potential preference of free trade and cooperation as a species-specific

predisposition (Bryman, Bell, & Hirschsohn, 2021:111). As a rising trend in research, multi-case study designs are becoming increasingly common within the business and management research domains, and are often called comparative designs (Bryman, Bell, & Hirschsohn, 2021:114). However, while the researcher is comparing two concepts or historically significant periods with one another, it is beyond the scope of this mini-dissertation to consider numerous other cases. Thus, this study's arguments and content largely embody a comparative design when considering ancient economic contexts, but within a scope that is appropriate for a mini-dissertation.

Time horizon

The study employs a longitudinal time horizon roughly spanning from around 100 000 BC (first cases of modern humans) to about 30 BC (shortly before the Roman occupation of Egypt). However, while the bulk of this historical comparative review is presented within this time horizon, certain sub-sections and conclusions make reference to current day events to answer the research questions of the mini-dissertation.

Ethical consideration

As this study is a historical comparative review in a qualitative methodology, no interviews or personal information is used to produce the study. It solely relies on secondary historical data, no personal data has been collected, and no interviews have been conducted.

However, great care is taken to interpret sources as responsibly as possible. Examples of these efforts include the acknowledgement of potential historical biases (e.g., colonial influences on archival material), citing original material as accurately as possible so as to avoid misrepresentation, and disclosing any limitations regarding source accessibility and source conclusiveness (i.e., in the case of fragmented or incomplete findings such as partial skeletal remains, incomplete documents, etc.).

Limitations of the research

Within the time horizon of this study, there is a concern regarding the very earliest considerations of our human history. The further back we move in history, the scarcer concrete evidence becomes. The researcher is concerned that, especially within the business context, there may be a lack of interest or a lack of "buy in" for this kind of analysis, due to our limited and hotly debated knowledge of early humans around 100 000 years ago.

However, to combat this, the researcher has scrutinised and strongly emphasised research involving the most robust bodies of literature. Thus, sections pertaining to early mankind where

little objective knowledge is available serve a tone-setting function and are intended to acknowledge the various theories that certain anthropologists and historians may have about our origins. Subsequent sections that have more robust evidence and literature comprise the bulk of this study.

The scope of the mini-dissertation demands a succinct project and does not expect an in-depth study typically found in other Masters and PHD studies. As such, the researcher is limited in terms of case selection, and how much can be delivered regarding these cases. Thus, the cases selected are based on proximity (geographical and chronological) and on the robustness of supporting literature.

Additionally, the parts of the time horizon that are the most susceptible to generalisations are, again, the earliest sections, due to the fragmented information and the number of variables in their case. Thus, to avoid generalisations, the researcher focuses on documented instances with the most credible literature to provide the core for the study, while, again, the earliest parts of the timeline serve an ancillary role.

Dissemination of study results

Through its considerations of the multiple-historical comparative review, this study weighs modern-day free market frameworks against the three historical chapters of human development to determine the merits or demerits of free market systems. The findings are presented in a conclusion, where, it is hoped, the logical rigour with which the evidence is submitted will determine the outcome.

Contribution to responsible management

This study will assist responsible management in developing healthy and empathic strategies when working in a team environment. Cooperation was a necessity for our ancient ancestors to survive in some of the harshest conditions in our human history, and it is part of the researcher's paradigm that the propensity for reciprocal cooperation is an innate trait among humans. True sustainability requires everyone to do their part to achieve a greater vision, which is not too dissimilar (in principle) to what our ancestors had to do hundreds of thousands of years ago. With modern technology and the AI revolution in full swing, it is easy to get lost in visions of the future, but there is a lot of wisdom still to be gained from the past.

2. CHAPTER 2: LITERATURE REVIEW

2.1. OLDEST TRACES OF HUMAN COOPERATION AND TRADE

This section reviews scholarly perspectives on early human trade and cooperation by drawing primarily from archaeological and anthropological sources focused on the Fertile Crescent. This helps to establish the potential for foundational evidence regarding species-level trading behaviours. By examining these perspectives, the study highlights how these practices predate formal economic conventions and systems, and may reflect a crucial adaptive quality necessitated by harsh environments.

As a starting point, this section explores the earliest archaeological and anthropological evidence of human cooperation and trade from approximately 130,000 BC, which sets the stage for the developments surrounding farming and agriculture during the Neolithic Revolution around 10,000 BC. Owing to the social reorganisation and technological advances of these periods, organised societies, urbanisation, and state formation emerged around the 5th and 3rd millennia BC. This literature review draws insights inductively from secondary historical sources with a focus on the Fertile Crescent, which encompasses modern-day regions of Iraq, Syria, Turkey, Iran, and Egypt (Bar-Yosef, 2002:381). A map of this region is provided below.

Figure 2.1: Fertile Crescent Region (Wolter, T., 2025).

The map of Babylonia and Assyria was selected because it depicts the entire region of the Fertile Crescent, with core locations like Mesopotamia, Uruk, Ur, the Tigris and Euphrates rivers, etc. It also illustrates how the Fertile Crescent's "crescent-shaped" geography curves as a result of fertile river-fed valleys, and connected early trade routes with overland paths and even waterways (Wolter, T., 2025).

The Fertile Crescent was chosen as the primary study terrain due to its rich historic and prehistoric records, and the civilisation throughline that can be traced from the pre-Neolithic Fertile Crescent to the birth of dynastic Egypt. As this study is chiefly focused on historical enquiry and contextual comparisons of different (or similar) social phenomena, a comparative historical analysis offers a distinctive approach which allows for a dialogue between theory and evidence in a manner that is rarely found in social research (Mahoney & Rueschemeyer, eds., 2003:20).

Motifs of exchange will also be examined, such as the movement of raw materials like obsidian and decorative shells across a harsh Ice Age environment. Insights surrounding these motifs pose thought-provoking questions about the potential coevolution of speech and trade, which underscores a potential propensity for cooperation and, by extension, trade that predates formalised economies found in the current day. Through an inductive curation of peer-reviewed sources and credible historical sources, exploratory insights can be offered surrounding early human development and even how the homo sapiens outlasted more robust hominins like the Neanderthals (Hublin *et al*., 2017:290).

These early traces of trade reveal a potential human tendency for cooperation and resource exchange which predates modern trading systems by a substantial margin. However, with the fragmented historicity of sources this old, definitive conclusions on sources like these are limited, but they are evidence worth discussing, regardless. The implications of a structured exchange this old can greatly inform today's economic context, especially surrounding individual agency, inter-community exchange, and the potential for trade to serve a social function as well.

In essence, this section serves as a theoretical and chronological starting point for upcoming discussions where the earliest, albeit fragmentary, traces of human cooperation and trade set the stage for later sections and discussions. Subsequent sections on archaeological period transitions and consequent urbanisation will align with a pragmatic paradigm which intends to emphasise practical and context-driven interpretations of early human behaviour. For ease of access, a timeline of archaeological periods also supports the stage-setting function of this section of the literature review.

Figure 2.2: Archaeological Periods (Armstrong Institute of Biblical Archaeology, 2022).

2.1.1. Prehistoric evidence of trade in the Fertile Crescent

Archaeological findings from the Fertile Crescent suggest that early homo sapiens (and, potentially, their predecessors) engaged in some forms of resource exchange over significant distances. This implies a social network that would have been vital for survival during the harsh Ice Age period. A compelling indicator of such a social network can be found in the movement of obsidian, which is a type of volcanic glass often used for creating tools, which can be traced via techno-typological analysis (i.e., dating done via tool technologies and their associated archaeological periods) as far back as 41,000 – 32,000 BC (Frahm & Hauck, 2017:415). Some specimens of obsidian originating in Anatolia have been found approximately 300 – 500km away, while some specimens from the Upper Paleolithic travelled between 600 - 900km (Frahm & Hauck, 2017:415). A specific example can be found from the Yabroud Rockshelter II in Syria, where obsidian originating from Göllü Dağ in central Turkey was found at the site, indicating a +-700km journey on foot (Frahm & Hauck, 2017:415). This spread of obsidian implies that villages in the region did not exist in isolation from others (Frahm & Hauck, 2017:416). The movement of specific technologies like obsidian facilitated technical and, as a consequence, social innovation across the region (Frahm & Hauck, 2017:416).

Further evidence of trade or exchange can be found from coastal and inland sites where seashells from the Mediterranean are found at inland locations like the Üçağızlı Cave in Turkey, dated to approximately 41,000 – 29,000 BC (Kuhn *et al.*, 2008:87). Similar shells from the nearby Direkli Cave were transported over distances greater than 100km from the Mediterranean coast and showed signs of perforation and alteration, hinting at a potential adorning, ornamental, or ceremonial role (Baysal & Erek, 2018:591). The placement of these two caves is illustrated below:

Figure 2.3: Map showing Üçağızlı Cave and Direkli Cave in Turkey (Baysal & Erek, 2018:592)

Findings like these imply physical trade practices, as well as social signalling practices where cooperation cultivated alliances within the surrounding environmental pressures. While the movement of these marine shells indicates the potential movements of people, it also hints towards their ideas, as these shells had to be considered of significant value to be carried this far from their natural sources (Baysal & Erek, 2018:592). By following these recurring motifs and shell distribution patterns, one sees indications of sustained and intentional interactions rather than exclusively sporadic and opportunistic movements of more isolated hunter-gatherer populations.

The social dimensions of this kind of exchange is further supported by evidence of ancient communal events and activities (Bar-Yosef, 2002:367). The Shanidar Cave in Iraq, with material dated to approximately 70,000 – 60,000 BC, yielded pollen traces that are associated with Neanderthal burials which suggests ritualistic gatherings that likely involved the sharing of certain resources or knowledge (Pomeroy *et al*., 2020:7). Additionally, Homo sapiens remains at other sites like Qafzah Cave in Israel, with material dating to approximately 100,000 – 80,000 BC, have also been discovered with antler tools, which indicates the typical cooperative hunting culture along with its associated likelihood of advanced hunting strategies, communication, and resource

pooling (Bar-Yosef Mayer, Vandermeersch & Bar-Yosef, 2009:313). The intentionality of these burials is symbolic, and the act of deliberate burial, along with specific burial gifts, suggests (at the very least) that a strong social or emotional bond existed between the survivors who did the burial, and the deceased (Hovers *et al*., 2003:508).

Inductive evaluation through CHA reveals both correlative insights as well as potential contradictions. While it is not definitively clear why an antler tool may be buried with an individual, it is probable that the antler tool had value in the specific social group's context. Be it of spiritual, emotional, or practical value, the antler was deliberately chosen due to its being of some value to the survivors, as well as the deceased. The same can be said when tracking the movement of ornamental shells from the Mediterranean coastline to more central locations, as well as the significant distances that obsidian travelled from its place of origin. However, the sporadic nature of these shells and obsidian flakes still poses a challenge for scholars to reach definitive conclusions about their transport methods and exchange behaviours. Insights like these indicate, or at least suggest, that a propensity for human care and collaboration existed, and a sense of value, spiritual or otherwise, is consistent with these humans' burial habits and the distances travelled to acquire or exchange these items.

2.1.2. Global parallels: examples from sub-Saharan Africa and beyond

As the colloquial point of origin for Homo sapiens around 315,000 years ago (Hublin *et al*., 2017:289), sub-Saharan Africa provides additional evidence from a vastly different environment, which may hint towards a potential universality of early trade behaviours. In South Africa, the Blombos Cave site, with material dating to approximately 100,000 – 70,000 years ago (Reynard *et al*., 2016:350), reveals ochre artifacts that were used for both utilitarian functions (i.e., tanning hides, skin protection) and symbolic functions like artwork and ceremonial paint (Henshilwood *et al*., 2002:1278). Other engraved artifacts and shell beads were also found at this site, suggesting a similar symbolic ritual or exchange system to what was discovered in the Fertile Crescent, which is often regarded as a marker for modernity (d'Errico *et al*., 2005:4). Findings like these indicate that African hominins displayed a similar propensity for symbolic action, and a sense of value retarding the far-travelled artifacts.

Despite the vast cultural distance between global sites, especially when comparing separate contexts like the Cerutti Mastodon site in California USA to the Göllü Dağ site in central Turkey, two common themes come to fore, namely (1) a practical drive to acquire utilitarian tools like obsidian or animal bones, and (2) a definite, albeit poorly understood, symbolism with an early sense of value being associated with this symbolism. These themes can provoke important

questions surrounding environmental pressures, and how these same pressures might have played a role in the development of hominin trade as a harsh necessity of survival.

2.1.3. Coevolution of speech and trade: An intrinsic human propensity

This compelling hypothesis posits that speech partly developed in order to enable inter-tribal or inter-group cooperation and trade. Some evolutionary models suggest that the dispersion of Homo sapiens out of the African continent, approximately 100,000 – 50,000 years ago (López *et al*., 2015:58) facilitated enhanced communication systems, as these groups of hominins faced newer, unfamiliar terrains and threats (Horan *et al*., 2008:295). Enhanced communication also allowed for greater levels of trust-building within their groups, which is an essential precondition for trade agreements to occur, this being a significant distinguishing factor among Homo sapiens when compared to other hominins (Schulz, 2022:8). As communication is a prerequisite to engage in meaningful and fair exchange, our unique proficiency to communicate with unprecedented precision directly impacted our ability to trade, which, in a sense, is also a form of communication.

2.1.4. Survival amid harsh environments: Outlasting robust species

The merciless Ice Age environments of around 115,000 to 11,700 years ago were primarily characterised by colder and drier climates, with vast ice sheets covering large portions of the northern hemisphere (NOAA, 2021). This lowered sea levels, exposed land bridges, and caused frequent advancement and receding of ice sheets which directly impacted vegetation and animal life (Smithsonian's Human Origins Program, 2024). During this time, the Fertile Crescent region featured arid steppes and tundra-like conditions during peak glacial periods, with brief periods of precipitation that played a role in supporting the region's sparse woodland areas (Robinson *et al*., 2006:1517-1519). With conditions like these, the aforementioned hypotheses surrounding environmental pressures and the selection of complex linguistic capabilities as collaborative tools sound like plausible and practical directions of thought regarding our survivability (Potts, 1998:107).

Features of the Neanderthals' physical robustness included larger muscle mass, shorter limbs that allowed for greater heat retention, faster metabolic rates, and denser skeletal structures; these all indicated a species well suited to colder climates (Weaver, 2009:16032). Neanderthals exhibited localised hunting practices, but did not partake in much long-distance trading or exchange, evidenced by a significant reliance on flint materials that were found no further than 50km from their point of origin (Turq *et al*., 2017:95). In contrast, Homo sapiens' potential survival advantages stemmed from greater social cooperation, technological flexibility, and much broader social networks (Peeters & Zwart, 2020:33). Homo sapiens leveraged extensive tool exchanges

that spanned hundreds, if not thousands, of kilometres (Pearce & Moutsiou, 2014:3). While Homo sapiens incorporated these vast networks with other groups, the Neanderthals, who faced demographic isolation, went extinct around 40,000 years ago, with the most likely culprits being their overall smaller group sizes, inbreeding, and an inability to communicate, or navigate across, larger networks (Degioanni *et al*., 2019:2).

On a broad level, this section's theme indicates that, despite being physically less robust than their Neanderthal cousins, Homo sapiens achieved significantly more survival success during this harsh climate period. This indicates social networking and resource exchange as a key differentiator between the two species, which was consequently pressured for selection over this period. This differentiator led our species to where it is today, with almost superhuman levels of communication facilitated by our technologies, especially apparent in the widespread AI boom we are experiencing today.

2.1.5. Linking to broader study

In summary, this section provides evidence of prehistoric cooperation, social networking, and resource exchange as early forms of trade as foundational human traits. While limitations in ancient data availability remain an issue, the insights garnered from this discussion contribute contextually towards the greater discussion surrounding ancestral economic preferences, and their potential relevance to modern contexts. From our earliest examples of human networking, there are clear themes of (1) building of social bonds while honouring the passing of friends or family, and (2) resource exchange being a motivated practice regarding practical tools as well as symbolic or ritualistic items.

2.2. TRADE AND COOPERATION LEADING UP TO THE NEOLITHIC REVOLUTION

This section examines pre-Neolithic developments in the Fertile Crescent between 12,000 – 10,000 BC. This period encompasses the Epipaleolithic and Natufian cultures, and represents a transitional phase where hunter-gatherer communities began to adopt early forms of stationary lifestyles, in addition to mixed economies that combined traditional hunting and foraging practices with crop cultivation (Zeder, 2011:S221). Shifts like these led to enhanced trade networks with a greater emphasis on social cooperation and cohesion (Zeder & Smith, 2009:685). As part of this CHA, this section will inductively evaluate secondary archaeological and anthropological sources in an attempt to identify patterns in early trading mechanisms and their consequent social impacts.

2.2.1. Pre-Neolithic developments in the Fertile Crescent

The pre-Neolithic era in the Fertile Crescent was primarily characterised by environmental recovery following the Last Glacial Maximum of the Ice Age, which sported warmer and wetter conditions around 20,000–14,500 BC (Bar-Yosef, 1998:161). These conditions proved ideal for communities who wanted to live sedentary lives in the region (Bar-Yosef, 1998:161). The Natufian culture originated in the Levant region of the Near East around modern-day Israel, Palestine, Jordan, Lebanon, and Syria (Bar-Yosef, 1998:160). This culture provides some of the earliest examples of semi-permanent settlements in this region known for utilizing wild cereals, nuts, and game (Bar-Yosef, 1998:159). Sites like Abu Hureyra in Syria (bordering the Levant region) yielded evidence of early storage facilities and ground stone tools intended for processing wild grain, but also showed prominent signs of mixed economies that combined traditional hunter-gatherer activity with proto-agricultural practices (Bar-Yosef, 1998:168). Mixing these two economies is argued to have served as a potential buffer against seasonal variability (Zeder, 2009:685).

Trading and cooperative activity intensified during this time as communities still engaged with the exchange of non-local resources such as obsidian, as discussed in earlier sections (Matthews *et al*., 2020:1). Sites like Göbekli Tepe in Turkey are argued to be spiritual meeting places with evidence of resource exchange, possibly as offerings for ceremonial or religious practices (Matthews *et al*., 2020:10). However, Svizzero and Tisdell (2014) posit that pre-Neolithic economies were not solely subsistence-type communities, with evidence of early specialization of labour, production, and bartering systems, which further reinforce the perception of modern humans' strength as an inter-connected, resource-sharing species. That communal buildings built from stone were discovered, indicates a significant architectural transformation for our species when considering the nomadic and often cave dwelling lifestyles that earlier hunter gatherers lived (Banning, 2011:619). While communal, these structures represented (1) permanent or semi-permanent dwellings that were not built with the intention of abandonment or moving, (2) an opportunity to greatly and reliably increase the size of living units of tribes, and, perhaps most importantly for this study, (3) a sense of ownership over something that shows evidence of status-driven forces (Atakuman, 2014:2). Ownership is an abstract concept which implies a value that is exclusive from other tribal or non-tribal individuals, and it is through this exclusivity that an exchange of ownership (be it obsidian, grain, or a stone dwelling) can lead researchers towards a more primal understanding of our human ability (or, even, necessity) to trade and exchange our "ownership" of some things, to a new "ownership" of other things (Bowles & Choi, 2013:8834). This is especially important in the face of great environmental challenge and threat which, at this point in time, was, relatively speaking, not that long ago (Bowles & Choi, 2013:8832).

The pre-Neolithic Fertile Crescent's trading mechanisms were largely centered on informal barter systems that were facilitated by this unprecedented expansion of social networks (Ibáñez *et al*., 2015:9). The distribution of Helwan lunates (microlithic tools that originated in Egypt) across early Natufian sites in the Levant region indicates long-range exchange networks that span hundreds of kilometres (Bar-Yosef, 2013:7). These trade mechanisms conferred two major benefits on all the parties involved; these networks (1) ensured access to high-quality raw materials like Obsidian (Khalaily & Valla, 2013:193), while also (2) doing so in a reliable and guaranteed manner (Rosenberg *et al*., 2021:5). The social impacts of these mechanisms were profound, and served to compound our already-established proclivity for building social networks and exchanging resources by allowing trade networks and resource exchanges that were far more consistent and reliable than ever before; this was due to the emergence of permanent settlements that further engrained trade routes and inter-group dependencies and alliances (Bar-Yosef, 2001:25). A correlative feature of this period was the rarity of violence and trauma markers within Natufian burial sites when compared to contemporary populations from Nubia and Maghreb areas which showed clear indications of raiding; this fact suggests that (1) consistent and reliable trade might have reduced conflict between Natufian community members, (2) these community members generally lived safer lives with fewer fatal animal encounters, or (3) that a combination of these factors was in play (Bocquentin & Bar-Yosef, 2004:19).

2.2.2. From foraging to farming: A complex economic transition

The transition from a predominantly nomadic hunter-gatherer lifestyle to one of settled (or at least semi-settled) agriculture was a gradual process that unfolded as a result of a multitude of contributing factors rather than a single sudden event (Svizzero & Tisdell, 2014:3). There is much debate surrounding modern archaeological and genetic evidence that both points towards, and refutes a single-origin model for this transition, which, at the very least, indicates a more complex and pluralistic process (Fuller & Lucas, 2025:73). Domesticating key crops like emmer wheat, einkorn, barley, and lentils happened roughly at the same time as the domestication of animals such as sheep, goats, and cattle (Zeder, 2011:S221). In some cases, the same species of crop or animal had been domesticated multiple times and independently from other regions, which suggests that parallel innovation was widespread as a response to changing environmental conditions as opposed to originating from a central core area (Zeder, 2011:S229).

While many attribute the adoption of agriculture to a massive improvement to overall human well-being, there are others in the field of Ethnoarchaeology and Bioarchaeology that offer a contrasting view which suggests a potential regression of human well-being as a result of the

sedentary, agriculture-driven lifestyles with their crops of poor nutritional quality (Larsen *et al*., 2019:12620). Known by some as the "original affluent society", researchers believe that this society enjoyed more diverse diets, better health, and more leisure time than the first generation of farmers (Sahlins, 1972:7). However, despite garnering significant support since the 1970s, other researchers criticise similar claims as overly simplified and lacking robust data to definitively determine the societal welfare that hunter-gatherers enjoyed, especially in particularly harsh environments such as the African Savannahs and the Australian Outback (Kaplan, 2000:305). Bioarchaeological evidence was found in Neolithic sites such as Çatalhöyük in Anatolia that the region suffered increased rates of infectious disease, dental cavities (caused by carbohydrate-rich diets), and skeletal markers of strenuous and repetitive labour activity (Larsen *et al*., 2019:12615).

A possible resolution for the conflicting outcomes of agricultural innovation can be found in the measurement of community-level resilience rather than individual welfare (Bogaard *et al*., 2017:1). As seen from previous sections, agriculture adoption was a process and was marked by a distinct transitional period where early communities consisted of hunter-gatherers, farmers, and livestock ranchers at the same time (Bogaard *et al*., 2017:4). Rising population densities during the post-Ice Age climate pressured these communities to seek predictable and storable food supplies, which is a significant departure from the efficient foraging and hunting strategies that sustained smaller, more mobile groups (Palmisano *et al*., 2021:2). The implementation of this agriculture allowed for larger and denser population sizes and provided a critical safeguard against seasonal and regional scarcity of food items in the post-Ice Age Fertile Crescent (Matranga, 2024:12).

Essentially, this transition to an agricultural society represented a complex and gradual strategic trade-off on a species level: a clear acceptance of increased manual and repetitive labour with a reduction of individual health, in exchange for greater food security and the potential for longer term population growth, which we now know set the stage for the development of unprecedented societal complexity (Larsen *et al*., 2019:12615).

2.2.3. Economics of surplus, storage, and property

The development of both the concept and practice of surplus, storage, and property was pivotal and revolutionary for ancient trade economies as it transformed subsistence-reliant exchanges into systematic inter-group exchanges (Svizzero & Tisdell, 2014:9). This shift, through necessity, fostered division of labour (along with craft specialisation) and laid the groundwork for hybrid

economic systems observed in the Fertile Crescent context. These hybrid systems will be discussed in an upcoming section.

This newfound capacity of agriculture (especially when enhanced by proto-irrigation techniques) to generate a reliably consistent food surplus was the single most important revolutionary feature of its economy (Angelakıs, 2020:12). Up until this point, no human community in the region had the capability to store meaningful amounts of food for long periods, which was a premium capability at the time (Hole, 1984:55). This surplus formed a kind of proto-capital which was at the heart of the Neolithic economy; it facilitated a shift from immediate-return systems (i.e., foraging and hunting) to a delayed-return system (i.e., settled farming) as a profound social and technological innovation (Hole, 1984:50).

Consequently, this surplus demanded a set of new aptitudes and methods for its management and allocation where storage technologies such as granaries and silos became central features of Neolithic settlements; not too dissimilar in principle to current-day banks or funds, with the grains serving as a store of value (Palmisano *et al*., 2021:21). Having a surplus eliminated many environmental challenges, but presented new challenges that required long-term planning, seasonal coordination of labour, and new hierarchical structures to manage and protect these resources (Paik, 2010:10).

Additionally, the advent of settled agriculture fundamentally altered previously established concepts of ownership. Land that was cleared and cultivated proved to be more valuable than other tracts of land and was able to produce crops, which, in turn, led to the need to be able to legitimately exclude others from its use (Bowles & Choi, 2013:8831). This challenge created a powerful incentive to develop early forms of private property rights to restrict, or at least control, access to land or crops that belonged to the farmer (Bowles & Choi, 2013:8831). This mind shift marks a significant departure from older property norms that likely characterized older hunter-gatherer societies. However, in a farming economy, land and stored goods emerged as valuable, defensible property (i.e., some of the world's first assets) which established an unprecedented link between labour, property, and wealth (Bowles & Choi, 2016:7).

2.2.4. Social reorganisation

The Neolithic Revolution (also known as the Agricultural Revolution) served as a catalyst for a major reorganisation of these early societies with larger settlements and changing morals (Vásárhelyi & Scheuring, 2018:1). The aforementioned food surplus freed the population from mandatory and direct food production on a household level, which gave rise to the division of

labour and the ability to specialise in other artisanal roles like traders, priests, community leaders, craftsmen, and more (Svizzero & Tisdell, 2014:5).

Conventional theories hold that this surplus of food resources, in addition to the societal security it offered, also presented opportunities for an early state elite class (Mayshar, Moav & Pascali, 2022:1093). A more nuanced explanation can be found in the specific nature of the food resources themselves through theories like the appropriability theory, which posits that the primary crops of the Fertile Crescent (cereals like wheat and barley) were uniquely taxable by elite managers of the surplus due to the durability of those crops (Mayshar, Moav & Pascali, 2022:1099). Root and tuber crops are more perishable, but cereals are harvested in concentrated periods of harvest, remain durable when stored, possess a high value-to-weight ratio, and are easily divided and transported (Mayshar, Moav & Pascali, 2022:1092). Despite producing a surplus through more perishable crops, these communities did not develop the same complexity and state-level hierarchies of the cereal-based societies, which suggests that not all surpluses are equal in terms of driving societal development (Mayshar, Moav & Pascali, 2022:1093).

Technological advancements (e.g., ox-drawn plows) accelerated these surplus-driven trends through unprecedented productivity (Bowles & Choi, 2019:2209). This would lead to the farmer's land being the greatest factor of production, rather than the labour that works the land (Bowles & Choi, 2019:2197). These examples echo modern discourse surrounding labour and capital markets, and can serve as one of the earliest examples of these equally vital components of a modern economy.

2.2.5. The foundations of traditional economies

These foundational economies are rooted in kinship and subsistence (Earle, 2000:43), which laid the groundwork for the advancement of hybrid economic systems observed and discussed in later urban contexts such as Mesopotamia's blend of state and private economic forces. Building upon the surplus-building innovations from earlier periods, these ancient, urbanised cities facilitated large-scale and widespread trade networks.

The emergent economic system of the Neolithic served as the archetypal blueprint of what is currently defined in economic anthropology as a traditional economy (Earle, 2000:46). This model is marked by a focus on subsistence, but with economic activities that revolve around animal husbandry and agriculture (Mamedov *et al*., 2016:62). The production of these economies usually exists the family and kin level, where economic decisions are made according to customs, rituals, and social obligations rather than market principles (Mamedov *et al*., 2016:62). The Neolithic Fertile Crescent incorporated a mixed system that combined crop cultivation with animal

husbandry, and was supplemented by ancillary hunting and fishing activities with household and community self-sufficiency as the primary goal (Asouti & Fuller, 2013:329).

This ancient model for economic organisation demonstrates a remarkable persistence up to current times, with modern parallels being drawn with contemporary subsistence-based societies such as the Inuit people of Canada (Wenzel, 2013:186). While still integrated with the global economy (at least, tangentially and to varying degrees), these modern examples often retail core characteristics of the traditional economy model, which places emphasis on subsistence production, centrality of kinship, and the importance of custom as a guide to exchange goods (Ready & Power, 2018:76). These examples highlight the Neolithic economy as a durable and adaptive system that persisted over an exceedingly long period of human history, rather than a mere transitional period of human economic activity.

Surplus generation, facilitated by the agricultural revolution, formed the basis of economic organisation for later periods in the Fertile Crescent (especially with regards to the emergence of statehood), and still echoes in economic discourse today. The concept of surplus is reminiscent of modern-day state budgets and capital allocation, where grains and long-lasting grains served as the equivalent of current day currencies.

In summary, this section illustrates how the Neolithic transition in the Fertile Crescent built on traditional, kinship-based, subsistence economics as a crucial precondition for allowing the rapid reorganisation of society and urban contexts. The outcomes of this culmination will be discussed in the following section. Socially-driven developments such as these highlight a human propensity for adaptive cooperation which led to even further radical innovations regarding urban life, artisanship, and technology.

2.3. URBANISATION AND THE RISE OF THE STATE IN MESOPOTAMIA AND EGYPT

The economic innovations from the Neolithic Revolution formed the necessary foundation for the next significant leap in humanity's social organisation, which was the rise of cities and state-level communities (Ur, 2014:251). This section examines how concentrating populations, production, and power facilitated the rise of some of the world's first complex and familiar economies. By examining Mesopotamia and Old Kingdom Egypt, the section explores economic structures, administrative technologies, and the dynamic nature of institutional control and private enterprise which provided a developmental hotbed for new and innovative systems of resource exchange.

2.3.1. Economic drivers in the first cities of Mesopotamia

The surplus-producing capabilities of irrigated agriculture around the fertile plains of the Tigris and Euphrates rivers allowed for an unprecedented concentration of human population, which lead to one of the world's first Urban Revolutions around the 4th millennium BC (Ur, 2014:264). The city known as Uruk stands as archetypical example of this process; it grew into a massive urban centre that would later serve as the hub for complex regional trade and polity (Ur, 2014:253).

Fundamentally speaking, early cities like these were economic entities that performed functions that were distinct from the smaller agriculture-focused villages that came before them (Ur, 2014:249). These cities served administrative functions such as collecting, storing, and redistributing of agricultural surpluses that were produced in surrounding rural areas (Ur, 2014:253). Cities were also industrial hubs that allowed for concentrated communities of specialised artisans who engaged in the mass production of goods such as pottery, textiles, and metalwork (Ur, 2014:249). Additionally, cities were central for long-distance trade in organising the exchange of local agricultural products, as well as manufactured goods (Algaze, 1989:581). Many of the goods found at sites like Uruk were made from raw materials that were absent from the Mesopotamian environmental context (with some items coming from Iran) which speaks of the importance of inter-regional trade (Algaze, 1989:581).

With that said, such dense gatherings of human communities had their share of disadvantages as well. Before sanitation systems and early modern medicinal practices were invented, these cities were ideal breeding grounds for infectious diseases which resulted in higher mortality rates than in rural areas (Algaze, 2018:2). This made it increasingly difficult to sustain such large populations, with a suspected constant stream of migrants arriving from the countryside serving as a crutch to help stem the overall mortality rate of these cities (Algaze, 2018:2). These migrants were often drawn to the cities by prospects of commercial opportunity and the security of city walls and infrastructure (Algaze, 2018:1).

2.3.2. Mesopotamia's mixed economy model

Early scholarship on the Mesopotamian economy is heavily influenced by the nature of surviving textual archives from temples and palaces that are not definitively decipherable (Foster, 1981:231). These often portrayed the region's economy as a monolithic temple-economy or a command economy, where all productive enterprise was controlled by large state-driven institutions (Lamberg-Karlovsky, 2009:8). However, other critical examinations of both textual and

archaeological evidence reveal a system that is more complex and dynamic, which more accurately resembles a mixed economy where a vibrant private sector operated in tandem with state-driven institutions (Lamberg-Karlovsky, 2009:9).

Evidence of this symbiosis between the private sector and the state are found in cultural records such as the *Epic of Gilgamesh* that documents familiar constituents such as private ownership of land, independent artisans, and entrepreneurial merchants that were often organised as family firms that conducted extensive long-distance trade in the hopes of earning a profit (Garfinkle, 2013:105-111). Rather than simply being oppositional forces, the public and private sectors show evidence of a deep interdependence (Garfinkle, 2013:112). The temples and palaces were the primary consumers of raw materials and luxury goods which created a substantial, consistent, and stable demand that fuelled the activities of private traders in the region (Al-Mutawalli, 2017:94). Additionally, state institutions also provided a foundational administrative and legal framework for their economy by enforcing contracts, standardising weights and measurements, and providing a degree of security that helped to reduce the inherent risks of trading in general (Al-Mutawalli, 2017:94-98).

These urban innovations in Mesopotamia and Egypt demonstrate how cooperative systems quickly intensified and became more complex and, consequently, similar to our systems today. Additionally, we see historical evidence that humans, in the face of overly centralised state bodies, will seek out decentralised governance, as evidenced by the rise of the Nomarchs. Additionally, private sector activity was still present in centralised Old Kingdom Egypt, suggesting that the complete exclusion of the private sector was very difficult to achieve.

In essence, early forms of statehood (while not entirely infallible) served valuable infrastructural, administrative, and legal functions for their patrons in exchange for a portion of the private sector's productivity and trade. This symbiosis shows how the world's first urban economies did not exist as centralised, monolithic systems, but rather as a sophisticated interplay between state institutions and market-driven exchange which were interdependent on one another (Liverani, 2014:29).

2.3.3. Administrative technologies of a complex economy

Due to the growing scale and complexity of the Mesopotamian urban community, the development of new administrative technologies to better manage and control the region's resources was vital to its continued growth (Liverani, 2014:7). The most significant of these

technologies was writing (Liverani, 2014:7). The earliest script (proto-cuneiform) emerged from Uruk around 3200 BC and was designed for practical tasks regarding economic administration, accounting for goods, tracking rations, and managing labour rather than the expected purposes of recording literature and historical events (Hirst, 2025).

Mathematics was equally critical as a tool for scribes to develop sophisticated arithmetic and geometric systems for surveying land, determining crop yields, calculating tax obligations, standardising weights and measurements of traded goods, and allocating rations and resources to institutional workers (Tao, 2022:106). In addition to its practical applications, mathematics also played a crucial societal role as a powerful instrument for justice (Gonçalves 2023:18). It allowed for an objective and rational basis for settling contract, inheritance, or land disputes, helping administrators to maintain a new level of social order while also fostering the trust needed for a complex economy to function (Michel, 2025:76-77).

The Mesopotamian economy also employed an early, but sophisticated form of credit and debt (Garfinkle, 2004:1). Loans were issued by both temples and private individuals and were essential for the functioning of both agricultural development and artisan-driven commerce (Garfinkle, 2004:5). Household loans were typically denominated in barley and labour which allowed cultivators and farmers to subsist between planting and harvest seasons (Garfinkle, 2004:4). Commercial loans were typically denominated in silver, which served as capital for merchants to facilitate their long-distance ventures (Garfinkle, 2004:5). While revolutionary for social organisation, familiar social strains existed such as exorbitant interest rates, debt slavery, and even land forfeiture when smallholders or farmers defaulted on their payments (Garfinkle, 2004:23). There is evidence of this system posing enough risk to Mesopotamian societies that the region’s rulers had to intervene with “clean slate” edicts to cancel agrarian debts and return land to farmers to help restore social and economic stability (Garfinkle, 2004:7).

2.3.4. Credit in the Bible and the Torah

Biblical passages surrounding the centrality and ethics of credit and debt systems also show potential social and religious discourse surrounding these systems.

> The prohibition on usury is clear: "If thou lend money to any of my people that is poor by thee, thou shalt not be to him as an usurer, neither shalt thou lay upon him usury." (Bible, 2017, Exodus 22:25).

This verse forbids the charging of interest (called usury) to poor Israelites, which confirms that the use of credit and debt was a feature of society, but it had social and ethical restrictions to prevent the exploitation of vulnerable people. Regarding the aforementioned “clean slate” edicts of Mesopotamia, the Bible offers a similar ethical framework.

> "At the end of every seven years thou shalt make a release. And this is the manner of the release: Every creditor that lendeth ought unto his neighbour shall release it; he shall not exact it of his neighbour, or of his brother; because it is called the LORD'S release." (Bible, 2017, Deuteronomy 15:1-2).

This “release” refers to the Sabbatical Year (known as the Shmita) as the end-point of the seven-year agricultural cycle mandated by the Torah and observed in Judaism (Krantz, 2016:1). Agricultural land was allowed to rest before replanting, and debts were to be forgiven every seven years, and the explicit mention of a “creditor” in religious texts establishes that lending systems were commonly used, and debts were recognised and recorded (Krantz, 2016:6). While the books of Exodus and Deuteronomy are considered to be more recent than the approximate 3000-year threshold of Mesopotamian trade conventions, dating from the Mosaic Period of 1300 – 1200 BC, to the Post-Exilic Period of 538 BC (Dozeman, 1999:105), it is worth noting how this social organisation surrounding credit and debt touched on ethical and spiritual concerns of the time, while also noting the long-lived nature of credit and debt. What started as a practical system of material exchange as a necessity for rapidly expanding societies, ended up being such a central human practice that foundational religious texts mention and explain them in great detail. In modern times, credit is deeply entrenched and far more advanced, but with a colder regard for debt slavery than in antiquity (Hudson, 1993:5).

2.3.5. The economy of Old Kingdom Egypt

Old Kingdom Egypt shared a foundation in riverine agriculture with Mesopotamia, and it developed along a distinct trajectory which was heavily shaped by its unique political and geographical context (Mayshar, Moav & Neeman, 2017:630). The early political unification of regions like the Nile Valley resulted in a more centralised territorial state, which contrasts to the landscapes found in competing city-states such as those found in Mesopotamia (Mayshar, Moav & Neeman, 2017:624).

This centralisation was organised around the official ideology of land tenure, where the Pharoah was seen as the ultimate owner of all land in Egypt; in reality, however, the system was more

complex (Mayshar, Moav & Neeman, 2017:627). While the royalty directly controlled substantial agricultural estates (individually known as a Hwt), extensive tracts of land also belonged to temples as royal endowments granted to officials as compensation for their service (García, 2008:1-2). Furthermore, private land ownership by individuals by way of purchase or inheritance is well documented from the Old Kingdom onward, which indicates a mixed system of private ownership and commerce found beneath the layer of total royal control (Hasanov, 2024:57).

2.3.6. Labour organisation and the Corvée system

A crucial component of the state's economic strength was its ability to mobilise and manage labour through the corvée system, which existed as a version of statute labour, which most of the population was subjected to (Wallenfeldt, J, 2025b). Farmers and peasants made up the majority of the kingdom's population and were required to contribute towards state projects like digging irrigation channels and quarrying stone (Cooney, 2007:161-163).

This workforce was well organised and divided based on skill, and larger projects saw labour forces divided into crews (up to 8200 men), which were then divided further into smaller gangs (up to 1000 men), and then into phyles (up to 200 men) (Cooney, 2007:161-165). Archaeological evidence gathered from the Giza plateau revealed that these workers were not exclusively slaves as is commonly believed, though owned slaves also definitely featured (Lehner, 2015:399-400).

2.3.7. State revenue and trade

Recent discourse implies that state-organised, nationwide taxation during the Old Kingdom period was less systematic and routined, but was rather more sporadic than previously thought (Warden, 2015:488). The state seems to have relied heavily on direct production output from its own holdings and campaigns, with a heavy emphasis on agricultural production via estates (García, 2008:1-2).

Regarding its trading environment, the Egyptian state exercised more direct control over the economy than its Mesopotamian counterparts (Mayshar, Moav & Neeman, 2017:622-630). Local markets and private exchange of value was certainly a feature of Old Kingdom Egypt, but long-distance trade to foreign cities and economies was largely held as a state monopoly with official royal expeditions and campaigns employed to acquire strategic and luxury goods (Sowada, 2009:163-165). Some of these goods included cedar from Lebanon, and aromatic resins from the land of Punt (Sowada, 2009:9). This contrasts with the integral role that individual long-distance

traders played in Mesopotamia. However, much like Mesopotamia, the Old Kingdom economy functioned largely without the use of coinage, and relied more on a bartering system (Mark, 2017). To facilitate bartering, value was standardised by a unit of account known as a deben, which refers to a specific weight of copper or, for more valuable transactions, silver (Mark, 2017). This unit of account allowed for consistent pricing, and a means to exchange a variety of goods and services at a largely predetermined and agreed upon value.

2.3.8. The rise of provincial power and the nomarchs

Even though the Old Kingdom is characterised by its centralised government, its administrative structure was divided into sub-regions called nomes, each governed by an official representative known as a nomarch (Bowman, A.K., 2025). These administrators were initially based in the capital of Memphis, but they eventually relocated to the provinces that they governed (Strudwick, 1985:xiv). This shift would serve as a starting point for decentralisation in Egypt as, during the 6th Dynasty of the Old Kingdom, the power of the pharaoh began to weaken in favour of these nomarchs (Strudwick, 1985:267). The position of nomarch was initially bestowed by the king, but was a hereditary position for these administrators' descendants, who quickly grew in number to produce local dynasties that were largely independent of the pharaoh's central authority (Wilson, J., n.d.). This growth in regional power, in addition to economic strain incurred from costly projects and waves of famine, ultimately contributed towards weakening the central state, and brought about the beginning of the end of the Old Kingdom (Wilson, J., n.d.).

In comparing Egypt and Mesopotamia's systems, Mesopotamia's more flexible, mixed economy blends state institutions like temples with private enterprise and long-distance trade (Lamberg-Karlovsky, 2009:16-17). This teaches us the benefits of hybridity in promoting resilience and innovation amid high population density facilitated by high agricultural productivity (Ur, 2014:253). In contrast, Old Kingdom Egypt's centralised pharaonic structure was (at least, initially) supported by provincial nomarchs and command-driven resource management (Mayshar, Moav & Neeman, 2017:624-630), and illustrates the vulnerabilities of rigid control which contributed to operational decline under various pressures, including economic pressures (Wilson, J. n.d.). These findings reinforce the mini-dissertation's argument for balanced systems that favour adaptive and principled cooperation.

3. CHAPTER 3: RESEARCH METHODOLOGY

This chapter outlines the methodological framework employed in this study to address the research problem and questions without ideological bias. As a qualitative study relying on secondary sources, the approach focuses on the comparative historical analysis (CHA) method, which facilitates the examination of evolutionary economic patterns across prehistoric, Neolithic, and early urban periods.

3.1. RESEARCH DESIGN

The study adopts a qualitative, pragmatic research design grounded in CHA, a method that compares historical cases to identify patterns, causes, and outcomes in social phenomena (Mahoney & Rueschemeyer, 2003:12). CHA is appropriate here as it allows for the systematic comparison of trade economies in the Fertile Crescent across three crucial time periods: prehistoric (2.1), Neolithic transition (2.2), and urban Old Kingdom Egypt, and Mesopotamia (2.3). Consequently, the literature review draws on secondary historical and anthropological data to evaluate human propensities for trade and cooperation. The design is exploratory and intended to synthesise insights for contemporary economic discourse, such as balancing private enterprise with state oversight.

3.2 DATA COLLECTION

Data for this study (primarily secondary data) were collected from historical, archival, and academic sources to assess the economic systems adopted by early human communities in the Fertile Crescent. This historical method aligns with the study's methodological framework and objectives and leverages the extensive archival information on ancient societies available in various databases such as Web of Science, ScienceDirect, Scopus, JSTOR, DOAJ, and PsycINFO. Primary search terms on these databases include the following:

- Agricultural revolution
- Centralisation
- Comparative historical analysis (CHA)
- Decentralisation
- Fertile Crescent
- Free market systems
- Hunter-gatherer
- Hybrid economic systems

- Mesopotamia
- Natufian culture
- Obsidian
- Old Kingdom Egypt
- Relational anthropology
- Surplus
- Traditional economy
- Urbanisation

While much of this information exists in data form, qualitative examination of the chosen study terrain was particularly appropriate in areas involving culture, interpersonal dynamics, and economic organisation. Sources were selected according to their relevance to the specified historical periods in the proposal, and the study prioritised credible, peer-reviewed content that is as closely derived from primary origins as possible.

3.3 DATA INCLUSION CRITERIA

- **Topic relevance and scope:** Selected sources must directly address the key search terms, with an emphasis on ancient trade economies, resource allocation, social impacts, and economic organisation within the Fertile Crescent. Discussions to include prehistoric exchange, Neolithic agriculture, and early forms of urbanisation. Minor exceptions to the location criteria of the study were only included if they showed valuable similarities or contrasts to the research questions of the study.
- **Source type and quality:** Peer-reviewed journal articles, scholarly books, translated ancient texts, and archaeological findings from reputable academic publishers form the basis of this study. Preference was given to sources that were closest to the primary source, and multi-disciplinary perspectives were employed to enhance validity and minimise the risk of bias.
- **Source publication dates:** Sources published from 2000 onward were selected for contemporary discussions and interpretations, but due to the historical nature of this study, seminal works predating the year 2000 were incorporated as well.
- **Language:** Publications only written in English (UK or US English) were included in order to align with the researcher's language proficiency.

3.4 DATA EXCLUSION CRITERIA

- **Irrelevance:** Sources that fall outside of the Fertile Crescent or periods beyond 30 BC, as this would fall outside of the study's time and location scope.
- **Quality concerns:** Non-peer-reviewed materials and materials with clear ideological agendas or interpretations.
- **Inaccessibility and format:** Non-English texts, and incomplete texts without any clear indication of its origins and publication will be included.
- **Duplication:** Redundant sources that repeat identical information without serving an effective clarification, or validation role will be excluded from the study.

3.5 DATA ANALYSIS

Data analysis followed a chronological, thematic CHA approach focused on the identification of recurring patterns in economic organisation across sections of the literature review. Sources were coded thematically to help trace evolutions from rudimentary exchanges (i.e., obsidian dispersal) to structured and complex systems (i.e., surplus and state). These were supported by cross-comparisons between periods and regions (e.g., Mesopotamia vs. Egypt in section 2.3). Validity was enhanced through cross-checks of multiple sources (e.g., bioarchaeological, linguistic, and Biblical evidence), while biases were mitigated by incorporating multidisciplinary sources that converge on common topics or discussions.

3.6 LIMITATIONS OF THE METHODOLOGY

As noted in the introduction and proposal, reliance on secondary sources introduces limitations. These include potential interpretive biases in ancient records, and the fragmentary nature of knowledge of prehistoric times, which constrains definitive conclusions on various "unknowables". The qualitative design limits generalisability by focusing on historical objectivity within the Fertile Crescent, with minor global comparisons (e.g., sub-Saharan Africa) and ancillary parallels to modern subsistence economies. Time constraints in an MBA program precluded extensive primary archaeological consultation.

3.7 ETHICAL CONSIDERATIONS

Ethical integrity was maintained by adhering to NWU guidelines, including proper citation in NWU Harvard style to avoid plagiarism, and ensuring unbiased representation of sources. No human participants were involved, negating the need for ethical clearance beyond standard academic practices.

4. CHAPTER 4: RESULTS AND FINDINGS

The findings from this CHA reveals a clear thread regarding human trade and cooperation across millennia. Trading behaviour evolved from rudimentary exchanges in prehistoric times to sophisticated economic systems in the early civilisations of the Fertile Crescent. By synthesising the evidence from sections 2.1, 2.2, and 2.3, one can evaluate the extent to which these early exchange behaviours are innate to humans as a species-level tendency, which would have significant implications for current-day economic discourse.

4.1. PROPENSITY FOR TRADE AND COOPERATION IN EARLY HUMANS

Section 2.1 establishes that trade and cooperation were vital, species-differentiative behaviours that allowed the Homo sapiens to not only outlive more robust species like the Neanderthals, but also allowed Homo sapiens to achieve unprecedented population sizes, revolutionary social organisations, permanent dwellings and sedentism, and access to resources that would otherwise be impossible or difficult to obtain. Findings like these directly address secondary research question no.3. regarding the impact of trade on social organisation, and the answer seems to be that trade not only facilitated new innovations, but it transformed social organisation (which was already a species-specific strength of Homo sapiens) entirely.

While the implications of early obsidian dispersions are important clues for understanding the potential for far-reaching trade networks around 130,000 BC, it remains difficult to say definitively how these obsidian tools travelled those long distances. As for the secondary research question no.2. regarding when and how early societies traded goods, the evidence points to a behaviour (knowledge of which is admittedly tenuous due to its antiquity) that is over 100,000 years old. However, obsidian, as inanimate, non-consumable material not used by any other animal species, can only have been spread hundreds to thousands of kilometres through human use and intervention. So, despite a lack of absolute certainty on the specifics of early human trading behaviours of 130,000 BC (perhaps, an unknowable), it is clear that humans, at the very least, placed enough value in obsidian to carry it with them over substantial distances, and that behaviour was not isolated or tribe specific due to the widespread locations of these obsidian flakes and tools.

The coevolution of speech and trade further highlights an insightful relationship with regards to trading behaviour as a human propensity. Inter-group negotiations and trust-building interactions

are vital traits that were selected and which evolved through the very nature of early human hunter-gatherering (Schulz, 2022:8) (Laland, 2017:225). This selection pressure along with its evolutionary outcome resulted in a species that would go on to develop a means for producing predictable food items while remaining in one specific location; a gradual, technological revolution that would forever alter the way humanity interacted with the natural world, and how we interacted with each other. However, again, the often-fragmentary nature of prehistoric data limits definitive conclusions regarding specifics like pre-writing symbolic language, cultural features, and inter-tribe customs.

In essence, section 2.1 shows that an intrinsic human propensity for the exchange of goods is, at the very least, plausible and possible due to the widespread collections of obsidian tools and the natural selection bias for human species that have more advanced social networks; both of which appear to imply important pre-conditions for economic exchange.

4.2. THE TRANSITION TOWARDS STRUCTURED ECONOMIES

Section 2.2 demonstrates how pre-Neolithic developments (around 12,000 – 10,000 BC) built on the foundations established in section 2.1. The Natufian culture's semi-permanent settlements (Bar-Yosef, 1998:162-163) and mixed economies consisting of both hunter-gatherers and early farmers led to the first examples of surplus production, storage, and the concept of owned property (Svizzero, 2014:1-5). While hunter-gatherers were primarily reliant on moment-to-moment activity in order to sustain themselves, farming and property ownership were some of the earliest delayed-return systems in our history, and were made possible through this new ability to store and exchange value, along with the intensification of the division of labour (Svizzero & Tisdell, 2014:5). This concept of stored and exchanged value through predictable and distributable means is one of the fundamental concepts that undergirds our modern economy today and is reminiscent of savings accounts, mutual funds, and state budgets.

However, the unprecedented clustering of human settlements that would later become some of the first cities also exhibited some new challenges and societal setbacks through disease. Bioarchaeological evidence found at ancient sites like Çatalhöyük indicate that there was a marked impact on the overall health of these inhabitants through increased exposure to disease, and mounting labour demands (Larsen *et al*., 2019:12615). Despite these adverse effects, the traditional economy model emerged and can still be found today, which indicates its enduring quality and effectiveness as a cultural adaptation (Wenzel, 2013:181).

Section 2.2 highlights a gradual shift from hunter-gather-centric to agricultural-centric society in the Fertile Crescent, which led to ground-breaking technologies for value preservation (through a surplus), value exchange, food production, division of labour, and social organization. With the ability to shore up a surplus of any valuable item, a new societal role was formed out of necessity: that of a governor or a steward. At this time of our development in the Fertile Crescent, these surpluses were early bank-like structures, and the idea of capital as a spendable resource was crucial in establishing a social organisation similar to ours today.

4.3. COMPLEX SYSTEMS IN URBAN MESOPOTAMIA AND EGYPT

Section 2.3 represents a culmination of the trends and technologies discussed in the previous sections of the literature review, and illustrates the rise of urbanisation and state formation around 5000 – 3000 BC. Urbanisation was the solution to the problems of high population density, and high agricultural productivity (Ur, 2014:253), which was all made possible through the previously mentioned innovations surrounding permanent and semi-permanent dwellings, and the emerging surplus economy. Features like irrigation infrastructure and the distribution of a variety of trading goods with specialist craftspersons and labourers allowed for even greater divisions of labour and even for specialisations into specific crafts and occupations (Ur, 2014:257). To manage these revolutionary technologies, administrative technologies like writing (Liverani, 2014:7), mathematics (Liverani, 2014:7), and credit systems (Liverani, 2014:114) all facilitated resource management, contracts, and long-distance trading with other nations.

Old Kingdom Egypt exhibited far greater centralisation than previous periods through its pharaonic ideology supported by its provincial officials known as nomarchs (Mayshar, Moav & Neeman, 2017:624). These nomarchs, however, signalled early forms of decentralisation, which contributed to the kingdom's eventual decline due to economic pressures and increasing defiance from surrounding nomarchs (Wilson, J. n.d.). The orginal highly centralised structure of Old Kingdom Egypt contrasted greatly with the more dynamic mixture of control in Mesopotamia (Lamberg-Karlovsky, 2009:16), possibly hinting at decentralised and mixed economic contexts as being more stable and sustainable than rigid command-driven economies that can breed defiance in one's subjects and officers.

Section 2.3 highlights an exponential acceleration in technological practices such as monetary units like debens, irrigation canals, and long-distance trading routes, which saw a parallel acceleration in social and governance structures. However, where a decentralised economy puts the self-interest of the individual front and centre, it seems that highly centralised economies put the state at the forefront (Lamberg-Karlovsky, 2009:19). Thus, findings like these illustrate how

more flexible systems last longer and are more sustainable. This addresses the study's primary research question about how ancient trade systems can inform modern economic approaches, and seems to point us towards the fact that a balanced private-to-state relationship is more desirable than other approaches.

4.4. SYNTHESIS AND IMPLICATIONS FOR MODERN ECONOMIC DISCOURSE

Synthesising the evidence across sections 2.1, 2.2, and 2.3 reveals a steady continuum in human economic organisation, where trade and cooperation emerge as adaptive, species-level traits that evolved from informal prehistoric exchanges to structured Neolithic systems which led to complex urbanised economies. This progression demonstrates a plausible innate propensity for exchange, as illustrated in section 2.1 through obsidian dispersal and the coevolution of speech and social networks (Laland, 2017:228). These laid the groundwork for surplus-driven innovations illustrated in section 2.2, such as property ownership and division of labour (Svizzero & Tisdell, 2014:15). By section 2.3, the study showed that these foundations facilitated the emergence of two divergent models: Mesopotamia's dynamic blend of state oversight and private initiative (Lamberg-Karlovsky, 2009:1) contrasted with Egypt's more rigid centralisation, even under nomarchs, which contributed to instability amid economic pressures (Wilson, J. n.d.). This historical trajectory challenges reductive and over-simplified interpretations of economic systems; it suggests that humans have historically favoured flexible, hybrid arrangements that balance individual agency with collective governance, rather than extreme centralisation or unchecked individualism.

Anthropological perspectives further support these findings, indicating that a human propensity for trade is not merely a cultural artefact but a biologically and socially selected behaviour trait with deep evolutionary roots (Horan *et al*., 2008:294). For example, relational anthropology posits that economic interactions are inherently embedded in social relationships and evolved from prehistoric reciprocity to modern markets, and further implies that contemporary economics should prioritise relational dynamics over abstract models of self-interest (Van Nes, Nullens & Van den Heuvel, 2022:21). This aligns with evidence from ancient contexts, where trade facilitated survival and innovation without rigid ideological constraints, as seen in Mesopotamia's integration of temple economies with private contracts (Liverani, 2014:62) and Egypt's eventual decentralisation (Bussmann, 2014:88).

The trading systems discussed throughout this study are, in principle, not too dissimilar to our current day trade practices, but obvious technological advances have indeed complicated the

processes. Prehistoric exchanges of tools like obsidian reflected survival-driven reciprocity and tribe-based organisation. Current-day humans do not face the exact same survival challenges of their prehistoric ancestors, but they do face other survival challenges albeit in a different context. Prehistoric tribes faced unruly climate conditions, predators, disease, scarcity, and societal “growth pains”, while modern humans see survival as making ends meet, affording groceries, paying bills, paying mortgages, etc. Both tribes are tasked with survival, but in different contexts.

The similarities between current day economic organisation and Humanity’s Neolithic ancestors, however, are more specific. The advent of a grain-based surplus greatly resembled the capital of today, which is a storehouse of value that can be accrued through savings (from a private perspective) or through taxation (from a public perspective) to fund infrastructural advancement and provide services to citizens. While the principles of capital (as surplus), taxation, and interest on loans was in place at this point in time, the most obvious difference can be found in complexity. Neolithic societies had few options for legal tender (usually wheat, barley, or domesticated livestock), modern humans have hundreds of ways to exchange legal tender ranging from national currencies like the US Dollar, to cryptocurrency like Bitcoin.

Urbanisation and division of labour was in full swing in Old Kingdom Egypt and Mesopotamia. Again, the principle is quite familiar to our modern context regarding urbanisation and labour, but the familiar theme of complexity is found here as well. The types of dwellings, agricultural technologies, labour opportunities, and trade mechanisms such as Mesopotamia’s blend of state temples and private contracts echo current day governance contexts. Specialisation and division of labour was innovative at the time and continues today, but expanded exponentially in complexity and variety. What we see from these three contexts is how underlying trade principles continue to persist to the current day, and differ primarily in complexity.

These insights hold significant implications for modern economic discourse, particularly in polarised debates over free markets versus state-controlled enterprise. In a global context, the ancient Fertile Crescent's adaptive models suggest that hybrid systems blending principled private enterprise with light regulatory frameworks foster sustainability and innovation, as seen through Mesopotamia's mixed approach. From a current-day governance perspective, this implies that policymakers could draw from ancestral hybridity to find better solutions for the various socioeconomic challenges that we face today (real or perceived).

While limitations in prehistoric data, as indicated in section 2.1, and interpretive biases in urban records, as indicated in section 2.3, persist, this analysis contributes to unbiased economic

discourse by demonstrating that human economic preferences lean toward adaptive hybridity; allowing freedom to pursue principled personal ambition on an individual level, while contributing to a representative body of light-touch governance to help manage surpluses and resources. Future research could extend this to specific regions such as South Africa and other post-colonial countries, with a greater emphasis on more bioarchaeological evidence to refine potential implications on a biological level.

5. CHAPTER 5: CONCLUSION AND RECOMMENDATIONS

5.1. RESTATEMENT OF RESEARCH APPROACH

This study endeavoured to explore the possibility that trade and cooperation are natural human traits by examining ancient economies in the Fertile Crescent as a well-documented Neolithic region. Consequently, this mini-dissertation conducted a CHA of ancient trade economies in the Fertile Crescent to evaluate whether historical and anthropological evidence can indicate an innate human propensity for trade and cooperation as a species-level tendency. If true, it would have implications for contemporary economic discourse in heavily polarised contexts. By examining secondary sources across prehistoric exchanges (section 2.1), Neolithic transitions (section 2.2), and urban developments (section 2.3), the study offers unbiased perspectives on economic organisation in an attempt to address the research problem surrounding partisan divides between free-market capitalism versus state intervention.

5.2. KEY FINDINGS

The CHA reveals a linear but gradual progression of adaptive economic behaviours that begin with prehistoric evidence of widespread trade networks (e.g., obsidian dispersal around 130,000 BC) and the coevolution of speech for inter-group cooperation, and as an enabler for survival in harsh environments. The Neolithic shift (circa 12,000–10,000 BC) introduced surplus production, property ownership, and traditional economies which gave rise to the division of labour and value exchange. This foundation then evolved into booming urban systems (5,000–3,000 BC), where Mesopotamia's hybrid state-private models contrasted with Egypt's centralised pharaonic structures. Overall, the findings support a plausible human preference and propensity for flexible hybrid arrangements that balance individual agency and interests with collective governance as structure rather than command.

5.3. IMPLICATIONS FOR MODERN ECONOMIC DISCOURSE

These insights carry profound implications for modern economic discourse in both developed- and developing countries where ideological divides over market capitalism versus state intervention mirror global tensions noted in the introduction. Mesopotamia’s adaptive models seem to favour systems that integrate principled private enterprise with light regulatory frameworks to promote long-term resilience and sustainability. This view challenges reductive binary views on economic discourse by offering species-level insights regarding (1) our necessity to interact with one another, with trade being an important part of that interaction, (2) how our species was evolutionarily rewarded for our reliance on social networking, and (3) how a reliable

surplus and relationship with state and private sector allows for greater artisanal freedom than ever before in human history.

In terms of sustainability, this study presents evidence that highly centralised states can achieve immense success (as evidenced by Egypt's long-lived legacy), but the desire for decentralised governance (as evidenced by the nomarchs of Egypt) indicates an innate resistance against centralised ruling. Conversely, even in a highly centralised Egypt, the private sector always existed in one form or another, despite state pressures to achieve the contrary, which indicated another innate desire – for humans to have agency regarding their material success.

5.4. LIMITATIONS OF THE STUDY

This study acknowledges limitations inherent to historical analysis, especially with regards to the fragmentary nature of prehistoric data, discussed in section 2.1, and the potential for interpretive biases in urban records, discussed in section 2.3. An overall reliance on secondary sources as old as these constrain definitive conclusions on unknowable elements like exact prehistoric trade mechanisms and norms, or spoken customs. Furthermore, this topic of study will benefit greatly from inter-disciplinary research to capture the full social, anthropological, and evolutionary extent of early human trading behaviour, but this is beyond the scope of a mini-dissertation written solely from within the economics faculty of the NWU.

Despite these constraints, there is enough historical evidence to draw informative insights surrounding individualism, the role of community, ownership, trade, and the relationship between the state and the people.

5.5. RECOMMENDATIONS

To apply these findings practically, policymakers should prioritise economic policies that encourage principled private trade while incorporating light state enforced structures for surplus management and infrastructure. The two sectors can each facilitate the interests of the other, as long as both sectors do not overstep their limits. Private sectors are tempted towards reckless, unchecked, and (in extreme cases) inhumane practices, while state bodies are tempted to exert total control over subjects, rather than viewing themselves as stewards of a people. Conversely, a healthy private sector provides massive employment, general prosperity, innovation, and state revenue through taxation, and should therefore be encouraged to grow with as little operational obstacles as possible. Additionally, the healthy state is rightfully framed as comprising public servants who facilitate the day-to-day operations of everyday citizens as well as businesses through efficient infrastructure and services.

From humanity's earliest days distributing obsidian across hundreds of kilometres of hazardous terrain, we see how ingrained ownership and, consequently, exchange mechanics are for humans on a species level. Thus, it should come as no surprise that humans will favour economic policies that allow them to accumulate (and exchange) items they've produced or acquired, as humans are willing to go through great difficulty to engage in successful trade. As for the Neolithic humans, the advent of a surplus that is managed by a government allowed for an unprecedented level of physical and material safety amidst the advent of permanent housing and infrastructure investments developed by these early forms of government. It is, therefore, a core recommendation of this study that policymakers need to consider this precedent for private and public relations, as an overreach from either sector would not only constrict growth, but also defy aspects of human nature.

For educational practitioners, future curricula should integrate historical economic analyses as a useful tool to foster unbiased decision-making, and context building surrounding exchange mechanisms, rather than polarising learners into a particular "tribe" of political thinking.

Future research could investigate South African pre-colonial trade contexts, and to what extent colonial influences adhered to, and deviated from, these ancient hybrid systems found in the Fertile Crescent; especially when we consider how colonial powers often supressed or abolished native systems in order to enforce their own systems. This study provides valuable potential for additional CHA's that seek to draw parallels with the Fertile crescent findings surrounding preferred human social and economic organisation. This topic of study would benefit greatly from future studies that incorporate multidisciplinary analyses to fully capture the lived extent of ancient humans and how they engaged with one another socially and economically.

5.6. FINAL REMARKS

This mini-dissertation demonstrates that historical evidence supports an early human propensity for trade but with a preference for adaptive, hybrid economic systems that harness trade and cooperation to facilitate a harmonious and stable society. For South Africa and beyond, embracing this ancestral hybridity could mitigate partisan divides and promote sustainable development that is aligned with proven models from our ancient past. By understanding our shared species-wide history of cooperation, we are reminded of economic forces; neither too controlled, nor too free. It is clear that hybrid systems that are balanced have always supported human progress and prosperity.

REFERENCES

Ahmad, R. (2014). *On the move: understanding the nature of exchange and the organisation of transport at the site of Tell Sabi Abyad (Syria)*. Leiden: University of Leiden. (Thesis – MA)

Algaze, G. 1989. The Uruk expansion: cross-cultural exchange in early Mesopotamian civilization. *Current Anthropology*, 30(5):571-608.

Algaze, G. 2018. Entropic cities: the paradox of urbanism in ancient Mesopotamia. *Current Anthropology*, 59(1):23-54. https://doi.org/10.1086/695983

Angelakis, A.N., Zaccaria, D., Krasilnikoff, J., Salgot, M., Bazza, M., Roccaro, P., Jimenez, B., Kumar, A., Yinghua, W., Baba, A., Harrison, J.A., Garduno-Jimenez, A. & Fereres, E. 2020. Irrigation of world agricultural lands: evolution through the millennia. *Water*, 12(5):1285. doi:10.3390/w12051285

Alyaqoub, R., Alsharairi, A., & Aslam, M. Z. 2024. Elaboration of underpinning methods and data analysis process of directed qualitative content analysis for communication studies. *Journal of Intercultural Communication*, *24*(2): 108–116. https://doi.org/10.36923/jicc.v24i2.573.

Armstrong Institute of Biblical Archaeology. 2022. *Understanding the archaeological timescale*. https://armstronginstitute.org/787-understanding-the-archaeological-timescale Date of access: 16 Sept. 2025.

Asouti, E. & Fuller, D.Q. 2013. A contextual approach to the emergence of agriculture in Southwest Asia: reconstructing early Neolithic plant-food production. *Current Anthropology*, 54(3):299-345. https://doi.org/10.1086/670679

Atakuman, Ç. 2014a. Architectural discourse and social transformation during the early Neolithic of Southeast Anatolia. *Journal of World Prehistory*, 27(1):1-42. doi:10.1007/s10963-014-9070-4

Augustyn, A. 2025. Hunter-gatherer. In: *Encyclopedia Britannica*. https://www.britannica.com/topic/hunter-gatherer. Date of access: 30 Mar. 2025.

Azungah, T. 2018. Qualitative research: deductive and inductive approaches to data analysis. *Qualitative Research Journal*, 18(4): 383–400. https://doi.org/10.1108/QRJ-D-18-00035.

Azzimonti, M. 2023. *Partisan conflict in the U.S. and potential impacts on the economy*. https://www.richmondfed.org/publications/research/economic_brief/2023/eb_23-20. Date of access: 29 Jul. 2025.

Banning, E. B. 2011. So fair a house: Göbekli Tepe and the identification of temples in the pre-pottery Neolithic of the Near East. *Current Anthropology*, *52*(5), 619–660. https://doi.org/10.1086/661207

Bard, K.A. 2017. Political economies of Predynastic Egypt and the formation of the early state. *Journal of Archaeological Research*, 25:1-36. http://doi.org/10.1007/s10814-016-9095-6

Bar-Yosef Mayer, D.E., Vandermeersch, B. & Bar-Yosef, O. 2009. Shells and ochre in Middle Paleolithic Qafzeh Cave, Israel: indications for modern behavior. *Journal of Human Evolution*, 56, pp. 307-314. http://dx.doi.org/10.1016/j.jhevol.2008.10.005

Bar-Yosef, O. 1998. The Natufian culture in the Levant, threshold to the origins of agriculture. *Evolutionary Anthropology*, 6(5):159-177. doi:10.1002/(SICI)1520-6505(1998)6:5<159::AID-EVAN4>3.0.CO;2-7

Bar-Yosef, O. 2001. From sedentary foragers to village hierarchies: the emergence of social institutions. In W.G. Runciman, ed. *The origin of human social institutions* (*Proceedings of the British Academy* 110). Oxford: Oxford University Press:1-38.

Bar-Yosef, O. 2002. The Upper Paleolithic revolution. *Annual Review of Anthropology*, 31, pp. 363-393. http://dx.doi.org/10.1146/annurev.anthro.31.040402.085416

Bar-Yosef, O. 2013. Nile Valley-Levant interactions: an eclectic review. In N. Shirai, ed. *Neolithisation of Northeastern Africa* (*Studies in Early Near Eastern Production, Subsistence, and Environment* 16). Berlin: ex oriente:237-247.

Baysal, E.L. & Erek, C.M. 2018. Material movement in the Near Eastern Epipalaeolithic: implications of the shell and stone beads of Direkli Cave, Turkey. *Journal of Field Archaeology*, 43(8), pp. 591-603. http://dx.doi.org/10.1080/00934690.2018.1529506

Beuthe, T.P. 2016. *Seals and sealing practices in early administration in southwestern Asia and Egypt during the 4th millennium BCE*. London: University College. (Thesis – PhD) https://discovery.ucl.ac.uk/id/eprint/1515830/ Date of access: 05 Nov. 2025.

The Holy Bible. King James version. 2017. Vereeniging: Christian Art Publishers.

Bocquentin, F. & Bar-Yosef, O. 2004. Early Natufian remains: evidence for physical conflict from Mt. Carmel, Israel. *Journal of Human Evolution*, 47:19-23. https://doi.org/10.1016/j.jhevol.2004.05.003

Bogaard, A., Filipović, D., Fairbairn, A., Green, L., Stroud, E., Fuller, D. & Charles, M. 2017. Agricultural innovation and resilience in a long-lived early farming community: the 1,500-year sequence at Neolithic to early Chalcolithic Çatalhöyük, central Anatolia. *Anatolian Studies*, 67:59-82. https://doi.org/10.1017/S0066154617000072

Bowles, S. & Choi, J-K. 2013. Coevolution of farming and private property during the early Holocene. *Proceedings of the National Academy of Sciences of the United States of America*, 110(23):8830-8835. https://doi.org/10.1073/pnas.1212149110

Bowles, S. & Choi, J-K. 2016. *The origin of private property and the Neolithic agricultural revolution.* Paper delivered at the 12th Asian Law and Economics Association Annual Conference, Seoul National University School of Law, Seoul, South Korea, 24-25 June. http://aslea.org/program2016/4A_Choi.pdf

Bowles, S. & Choi, J-K. 2019. The Neolithic agricultural revolution and the origins of private property. *Journal of Political Economy*, 127(5):2186-2228. https://doi.org/10.1086/701789

Bowman, A.K. 2025. Nome. In: *Encyclopedia Britannica*. https://www.britannica.com/topic/nome-ancient-Egyptian-government. Date of access: 12 October 2025.

Bryman, A., Bell, E. & Hirschsohn, P. 2021. *Research methodology: business and management context*. 2nd ed. Cape Town: Oxford University Press.

Bussmann, R. 2014. Scaling the state: Egypt in the third millennium BC. *Archaeology International*, (17):79-93. https://doi.org/10.5334/ai.1708.

Cooney, K.M., 2007. Labour. In: T. Wilkinson, ed. *The Egyptian world*. London: Routledge, pp.160-174.

d'Errico, F., Henshilwood, C., Vanhaeren, M. & van Niekerk, K. 2005. Nassarius kraussianus shell beads from Blombos Cave: evidence for symbolic behaviour in the Middle Stone Age. *Journal of Human Evolution*, 48:3-24. https://doi.org/10.1016/j.jhevol.2004.09.002

Degioanni, A., Bonenfant, C., Cabut, S. & Condemi, S. 2019. Living on the edge: was demographic weakness the cause of Neanderthal demise? *PLoS ONE*, 14(5), art. e0216742. https://doi.org/10.1371/journal.pone.0216742

Dietrich, O., Heun, M., Notroff, J., Schmidt, K., & Zarnkow, M. (2012). The role of cult and feasting in the emergence of Neolithic communities: new evidence from Göbekli Tepe, south-eastern Turkey. *Antiquity*, *86*, 674–695.

Earle, T. 2000. Archaeology, property, and prehistory. *Annual Review of Anthropology*, 29:39-60. https://doi.org/10.1146/annurev.anthro.29.1.39

Elgeddawy, M. & Abouraia, M. 2024. Pragmatism as a research paradigm. *European Conference on Research Methodology for Business and Management Studies*, 23(1): 71–74. https://doi.org/10.34190/ecrm.23.1.2444.

Foster, B.R. 1981. A new look at the Sumerian temple state. *Journal of the Economic and Social History of the Orient*, 24(3):225-241. https://doi.org/10.1163/156852081X00156

Frahm, E. & Hauck, T.C. 2017. Origin of an obsidian scraper at Yabroud Rockshelter II (Syria): implications for Near Eastern social networks in the early Upper Palaeolithic. *Journal of Archaeological Science*: *Reports*, 13, pp. 415-427. http://dx.doi.org/10.1016/j.jasrep.2017.04.021

Frieden, J. 2020. *The political economy of economic policy*. https://www.imf.org/en/Publications/fandd/issues/2020/06/political-economy-of-economic-policy-jeff-frieden. Date of access: 29 Jul. 2025.

Fuller, D.Q. & Lucas, L. 2025. Contrasting pathways to domestication and agriculture around Southwest Asia. *Archaeological and Anthropological Sciences*, 17:74. https://doi.org/10.1007/s12520-025-02190-x

Garfinkle, S.J. 2013. Ancient Near Eastern city-states. In Bang, P.F. & Scheidel, W. (eds.). *The Oxford handbook of the state in the ancient Near East and Mediterranean*. Oxford: Oxford University Press, 94-119. https://doi.org/10.1093/oxfordhb/9780195188318.013.0003

Garfinkle, S.J., 2004. Shepherds, merchants, and credit: some observations on lending practices in Ur III Mesopotamia. *Journal of the Economic and Social History of the Orient*, 47(1), pp.1-30. https://doi.org/10.1163/156852004322760799.

Gonçalves, C., 2023. *Mathematics, administrative and economic activities in ancient worlds* Michel, C & Chemla, K. (eds,).. *Aestimatio: Sources and Studies in the History of Science*, 4, pp.1-40. https://doi.org/10.33137/aestimatio.v4.43350.

Hasanov, R.I., 2024. Economic foundations in antiquity: a historical exploration of ancient Egypt. *Reconstructing the Past: Journal of Historical Studies*, 2(1), pp.54-65. https://doi.org/10.54414/JOKX9485.

Haynes, G. 2017. The Cerutti Mastodon. *PaleoAmerica*, 3(3):196-199. https://doi.org/10.1080/20555563.2017.1330103

Henshilwood, C.S., d'Errico, F., Yates, R., Jacobs, Z., Tribolo, C., Duller, G.A.T., Mercier, N. et al. 2002. Emergence of modern human behavior: Middle Stone Age engravings from South Africa. *Science*, 295, pp. 1278-1280. http://dx.doi.org/10.1126/science.1067575

Hirst, K.K. 2025. Proto-cuneiform: earliest form of writing on planet Earth. *ThoughtCo*, 10 June. https://www.thoughtco.com/proto-cuneiform-earliest-form-of-writing-171675 Date of access: 12 Oct. 2025.

Hole, F. 1984. A reassessment of the Neolithic revolution. *Paléorient,* 10(2):49-60. https://doi.org/10.3406/paleo.1984.939

Holen, S.R., Deméré, T.A., Fisher, D.C., Fullagar, R., Paces, J.B., Jefferson, G.T., Beeton, J.M., Cerutti, R.A., Rountrey, A.N., Vescera, L. & Holen, K.A. 2017. A 130,000-year-old archaeological site in southern California, USA. *Nature*, 544:479-483. https://doi.org/10.1038/nature22065

Honoré, E. 2007. Earliest cylinder-seal glyptic in Egypt: from Greater Mesopotamia to Naqada. In H. Hanna, ed. *Proceedings of the International Conference in Cairo on Naqada and Qus heritage*. pp. 31-45.

Horan, R. D., Bulte, E. H., & Shogren, J. F. 2008. Coevolution of human speech and trade. *Journal of Economic Growth*, *13*, 293–313. https://doi.org/10.1007/s10887-008-9028-4

Hovers, E., Ilani, S., Bar-Yosef, O. & Vandermeersch, B. 2003. An early case of color symbolism: ochre use by modern humans in Qafzeh Cave. Current Anthropology, 44(4), pp. 491-522. http://dx.doi.org/10.1086/375504

Huang, C., Li, J. & Gao, X. 2022. Evidence of fire use by Homo erectus pekinensis: an XRD study of archaeological bones from Zhoukoudian Locality 1, China. *Frontiers in Earth Science*, 9: 811319. https://doi.org/10.3389/feart.2021.811319.

Hublin, J-J., Ben-Ncer, A., Bailey, S.E. et al. 2017. New fossils from Jebel Irhoud, Morocco and the pan-African origin of Homo sapiens. *Nature*, 546, pp. 289-292. http://dx.doi.org/10.1038/nature22336

Hudson, M., 1993. *The lost tradition of biblical debt cancellations*. New York: Henry George School of Social Science.

Igielnik, R. 2020. *70% of Americans say U.S. economic system unfairly favors the powerful*. https://www.pewresearch.org/short-reads/2020/01/09/70-of-americans-say-u-s-economic-system-unfairly-favors-the-powerful/. Date of access: 29 Jul. 2025.

Krantz, D., 2016. Shmita revolution: the reclamation and reinvention of the sabbatical year. *Religions*, 7(8), 100. https://doi.org/10.3390/rel7080100.

Kuhn, S.L., Stiner, M.C., Güleç, E., Özer, I., Yılmaz, H., Baykara, I., Açıkkol, A. et al. 2009. The early Upper Paleolithic occupations at Üçağızlı Cave (Hatay, Turkey). *Journal of Human Evolution*, 56, pp. 87-113. http://dx.doi.org/10.1016/j.jhevol.2008.07.014

Laland, K. N. (2017). The origins of language in teaching. *Psychonomic Bulletin & Review*, *24*, 225–231. https://doi.org/10.3758/s13423-016-1077-7

Lamberg-Karlovsky, C.C. 2009. Structure, agency and commerce in the ancient Near East. *Iranica Antiqua* 44 (0) (June 30): 47–88 (pages 1-30 in version downloaded on Harvard Digital Access site). https://doi.org/10.2143/IA.44.0.2034375

Larsen, C.S., Knüsel, C.J., Haddow, S.D., Pilloud, M.A., Milella, M., Sadvari, J.W., Pearson, J., Ruff, C.B., Garofalo, E.M., Bocaege, E., Betz, B.J., Dori, I. & Glencross, B. 2019. Bioarchaeology of Neolithic Çatalhöyük reveals fundamental transitions in health, mobility, and lifestyle in early farmers. *Proceedings of the National Academy of Sciences of the United States of America*, 116(26):12615-12623. https://doi.org/10.1073/pnas.1904345116

Lee, T. 2025. *The Fertile Crescent, Explained*. https://news.uchicago.edu/explainer/fertile-crescent-explained Date of access: 5 Nov. 2025.

Lehner, M., 2015. Labor and the pyramids: the Heit el-Ghurab "Workers Town" at Giza. In: P. Steinkeller & M. Hudson, eds. *Labor in the ancient world*. Dresden: ISLET-Verlag, pp.397-664.

Liverani, M. 2014. *The ancient Near East: history, society and economy*. Translated from the Italian by S. Tabatabai. London: Routledge.

Loo, A. 2025. *Free market*. https://corporatefinanceinstitute.com/resources/economics/free-market/. Date of access: 30 Mar. 2025.

López, S., van Dorp, L., & Hellenthal, G. 2015. Human dispersal out of Africa: a lasting debate. *Evolutionary Bioinformatics*, *11*(S2), 57–68. https://doi.org/10.4137/EBO.S33489

Mahoney, J. & Rueschemeyer, D. (eds). 2003. Comparative historical analysis in the social sciences. Cambridge: Cambridge University Press. http://dx.doi.org/10.1017/CBO9780511803963

Mamedov, O., Movchan, I., Ishchenko-Padukova, O. & Grabowska, M. 2016. Traditional economy: innovations, efficiency and globalization. Economics and Sociology, 9(2):61-72. https://doi.org/10.14254/2071-789X.2016/9-2/4

Mark, J.J. 2017. Trade in ancient Egypt. In: *World History Encyclopedia*. https://www.worldhistory.org/article/1079/trade-in-ancient-egypt/ Date of access: 12 Oct. 2025.

Mark, J.J. 2022. Trade in Ancient Mesopotamia. In: *World History Encyclopedia*. https://www.worldhistory.org/article/2114/trade-in-ancient-mesopotamia/ Date of access: 5 Nov. 2025.

Matranga, A. 2024. The ant and the grasshopper: seasonality and the invention of agriculture. Quarterly Journal of Economics, 139(3):1467-1504. doi:10.1093/qje/qjae012

Matthews, R., Matthews, W., Raheem, K.R. & Richardson, A. eds. 2020. *The early Neolithic of the Eastern Fertile Crescent: excavations at Bestansur and Shimshara, Iraqi Kurdistan*. Oxford: Oxbow Books.

Mayshar, J., Moav, O. & Neeman, Z. 2017. Geography, transparency, and institutions. *American Political Science Review*. 111(3):622-636. https://doi.org/10.1017/S0003055417000132.

Mayshar, J., Moav, O. & Pascali, L. 2022. The origin of the state: land productivity or appropriability? *Journal of Political Economy*, 130(4):1091-1144. https://doi.org/10.1086/718372

Michel, C., 2025. Practice and profession: everyday mathematics and their transmission in Mesopotamia and Egypt. In: M. Fried, ed. *A cultural history of mathematics, vol. 1 antiquity*. London: Bloomsbury, pp.63-87.

Mohammad, M. & Mohammad, A. 2021. Craft specialization in administration in pre- and protodynastic Egypt. *Miṣriqiyā*, 1(1): 136–162. https://doi.org/10.21608/misj.2020.45611.1009.

Moreno García, J.C., 2008. Estates (Old Kingdom). In: *UCLA Encyclopedia of Egyptology* 1(1). https://escholarship.org/uc/item/1b3342c2 Date of access: 12 Oct. 2025.

NOAA (National Oceanic and Atmospheric Administration). 2021. *Glacial-interglacial cycles*. https://www.ncei.noaa.gov/products/paleoclimatology/paleo-perspectives Date of access: 29 Sep. 2025.

Paik, C. 2010. *Underpinnings of institutions*. Stanford, CA: Stanford University. (Dissertation – PhD). http://purl.stanford.edu/yf113hn3642

Palmisano, A., Lawrence, D., de Gruchy, M.W., Bevan, A. & Shennan, S. 2021. Holocene regional population dynamics and climatic trends in the Near East: a first comparison using archaeo-demographic proxies. *Quaternary Science Reviews*, 252:106739. https://doi.org/10.1016/j.quascirev.2020.106739

Pearce, E. & Moutsiou, T. 2014. Using obsidian transfer distances to explore social network maintenance in late Pleistocene hunter-gatherers. *Journal of Anthropological Archaeology*, 36:12-20. https://doi.org/10.1016/j.jaa.2014.07.002

Peeters, S. & Zwart, H. 2020. Neanderthals as familiar strangers and the human spark: how the "golden years" of Neanderthal research reopen the question of human uniqueness. *History and Philosophy of the Life Sciences*, 42, art. 33. https://doi.org/10.1007/s40656-020-00327-w

Pomeroy, E., Bennett, P., Hunt, C.O., Reynolds, T., Farr, L., Frouin, M., Holman, J. et al. 2020. New Neanderthal remains associated with the "flower burial" at Shanidar Cave. *Antiquity*, 94(373), pp. 11-26. http://dx.doi.org/10.15184/aqy.2019.207

Potts, R. 1998. Environmental hypotheses of hominin evolution. *Yearbook of Physical Anthropology*, *41*, 93–136. https://doi.org/10.1002/(SICI)1096-8644(1998)107:27+<93::AID-AJPA5>3.0.CO;2-X

Ready, E. & Power, E.A. 2018. Why wage earners hunt: food sharing, social structure, and influence in an Arctic mixed economy. *Current Anthropology*, 59(1):74-97. https://doi.org/10.1086/696018

Reynard, J.P., Discamps, E., Wurz, S., van Niekerk, K.L., Badenhorst, S. & Henshilwood, C.S. 2016. Occupational intensity and environmental changes during the Howiesons Poort at Klipdrift Shelter, southern Cape, South Africa. *Palaeogeography, Palaeoclimatology, Palaeoecology*, 449, pp. 349-364. http://dx.doi.org/10.1016/j.palaeo.2016.02.035

Roebroeks, W. 2007. *Guts and brains: an integrative approach to the hominin record*. Leiden: Leiden University Press.

Rosenberg, D., Gluhak, T.M., Kaufman, D., Yeshurun, R. & Weinstein-Evron, M. 2021. Exploring exchange and direct procurement strategies for Natufian food processing tools of el-Wad Terrace, Israel. *Scientific Reports*, 11:9480. https://doi.org/10.1038/s41598-021-88484-1

Sahlins, M. 1972. *Stone age economics*. Chicago: Aldine-Atherton.

Samuel, A.E. & Baines, J.R. 2025. Ancient Egypt. In: *Encyclopedia Britannica*. https://www.britannica.com/place/ancient-Egypt. Date of access: 30 Mar. 2025.

Schulz, A. W. 2022. Tools of the trade: the bio-cultural evolution of the human propensity to trade. *Biology & Philosophy*, *37*(8). https://doi.org/10.1007/s10539-022-09837-2

Skinner, M.F. 2019. Developmental stress in South African hominins: comparison of recurrent enamel hypoplasias in Australopithecus africanus and Homo naledi. *South African Journal of Science*, 115(5/6): Article 5872. https://doi.org/10.17159/sajs.2019/5872.

Smithsonian's Human Origins Program. 2024. *Climate effects on human evolution*. https://humanorigins.si.edu/research/climate-and-human-evolution/climate-effects-human-evolution Date of access: 29 Sep. 2025.

Sowada, K.N., 2009. Egypt in the Eastern Mediterranean during the Old Kingdom: an archaeological perspective. *Orbis Biblicus et Orientalis* 237. Fribourg: Academic Press; Göttingen: Vandenhoeck & Ruprecht.

Spikins, P., Needham, A., Tilley, L. & Hitchens, G. 2018. Calculated or caring? Neanderthal healthcare in social context. *World Archaeology*, 50(3):384-403. https://doi.org/10.1080/00438243.2018.1433060

Sterelny, K. 2012. Language, gesture, skill: the co-evolutionary foundations of language. *Philosophical Transactions of the Royal Society B: Biological Sciences*, *367*, 2141–2151. https://doi.org/10.1098/rstb.2012.0116

Stropoli, R. 2021. *How US political divisions shape global investing*. https://www.chicagobooth.edu/review/how-us-political-divisions-shape-global-investing. Date of access: 29 Jul. 2025.

Strudwick, N., 1985. *The administration of Egypt in the Old Kingdom: the highest titles and their holders*. London: Kegan Paul International.

Svizzero, S. & Tisdell, C. 2014. Theories about the commencement of agriculture in prehistoric societies: a critical evaluation. *Rivista di storia economica*, 30(3):255-307.

Svizzero, S. 2014. Pre-Neolithic economy. *History of Economic Ideas*, 22(2):25-40.

Tao, T. 2022. Metrology of weight, length, area, volume, and its origin. [Preprint]. ResearchGate. https://doi.org/10.13140/RG.2.2.33612.54408

Turq, A., Faivre, J-P., Gravina, B. & Bourguignon, L. 2017. Building models of Neanderthal territories from raw material transports in the Aquitaine Basin (southwestern France). *Quaternary International*, 433:88-101. https://doi.org/10.1016/j.quaint.2016.02.062

Ur, J. 2014. Households and the emergence of cities in ancient Mesopotamia. *Cambridge Archaeological Journal*, 24(2):249-268. https://doi.org/10.1017/S095977431400047X

Vásárhelyi, Z. & Scheuring, I. 2018. Behavioral specialization during the Neolithic: an evolutionary model. *Frontiers in Sociology*, 3:35. https://doi.org/10.3389/fsoc.2018.00035

Van Nes, J., Nullens, P. & Van den Heuvel, S.C., eds. 2022. *Relational anthropology for contemporary economics: a multidisciplinary approach*. Cham: Springer.

Wallenfeldt, J. 2025a. Agricultural revolution. In: *Encyclopedia Britannica*. .https://www.britannica.com/topic/agricultural-revolution. Date of access: 30 Mar. 2025.

Wallenfeldt, J. 2025b. Statute labour. In: *Encyclopedia Britannica*. https://www.britannica.com/topic/statute-labour. Date of access: 12 October 2025.

Warden, L.A., 2015. Centralized taxation during the Old Kingdom. In: Der Manuelian, P. & Schneider, T. eds. *Towards a new history for the Egyptian Old Kingdom: perspectives on the pyramid age*. Leiden: Brill, pp.470-496.

Weaver, T.D. 2009. The meaning of Neandertal skeletal morphology. *Proceedings of the National Academy of Sciences of the United States of America*, 106(38):16028-16033. https://doi.org/10.1073/pnas.0903864106

Wenzel, G.W. 2013. Inuit and modern hunter-gatherer subsistence. *Études/Inuit/Studies*, 37(2):181-200. https://doi.org/10.7202/1025716ar

Wilson, J. n.d,. *Western Civilization I.* Tucson: Pima Community College. https://pimaopen.pressbooks.pub/westciv1/chapter/reading-the-old-kingdom / Date of access: 12 October 2025.

Wolter, T. 2025. Fertile Crescent. In: *Encyclopedia Britannica*. https://www.britannica.com/place/Fertile-Crescent. Date of access: 30 Mar. 2025.

Wong, J. & Hendry, L. 2025. *The origin of our species*. https://www.nhm.ac.uk/discover/the-origin-of-our-species.html. Date of access: 12 Feb. 2025.

Zeder, M.A. & Smith, B.D. 2009. Comment: rethinking the origins of agriculture: a conversation on agricultural origins: talking past each other in a crowded room. *Current Anthropology*, 50(5):681-691. https://doi.org/10.1086/605553

Zeder, M.A. 2011. The origins of agriculture in the Near East. *Current Anthropology*, 52(Supplement 4):S221-S235. https://doi.org/10.1086/659307