

《論 文》

Morphological, Anatomical and Statistical Analyses on The Four Ancient Mesopotamian Law Codes Including The Hammurabi Law Code:

—— Part IV The Written Contracts and The Commercial Laws ——

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IV -1 Introduction

In the previous papers(part I ¹, part II ², and part III ³), the comprehensive analysis on the principal data base for the four ancient law codes(Ur-Nammu(UN), Lipit-Ishtar(LI), Eshnunna(E) and Hammurabi (H) law codes) were performed not only with contemporary view but also together with bird-eye view to determine their sizes, the contents, the transfers (correlations among them) (Part I)¹, and the social classes and developments of the professions (Part II)², and the legal violation, the penal law code and the civil law code(Part III)³. The conclusions obtained are briefly summarized as follows:

- (I -1) The Hammurabi law has overwhelming size; 2.6 times (=248/95) of the arithmetic summation of the other three preceding laws (Table I -5) and the H law is not a simple accumulation of the above preceding laws.
- (I -2) About 30~50% of the articles in the three preceding law codes is transferred to the H code(Table I -12). The transferred articles occupy only 13% (=32/248) (Table I -13) of the total articles of the H code : The degree of influence of the preceding codes to the H code is very restrictive (Table I -13).
- (I -3) The main target of these laws is obviously awilum(Table I -5).
- (I -4) All the legible articles of the four law codes are classified into 11 categories.
- (I -5) Modern legal ideas emerged evidently first from , except category 2, the Hammurabi law (Table I -7).
- (II -1) In the four law codes three~four social classes with different legal positions are found including king (Table II -1).
- (II -2) King(Hammurabi) whose authority of king was entrusted by the gods, has the supreme judgement (E58,E56) and the right to give amnesty (H129).
- (II -3) The object of the H law is the common people and the articles on awilum constitute the major part of the H law.
- (II -4) The jobs of awilum cover almost whole range of jobs of the society at Old Babylonian period (Table II -6a and Table II -6b).
- (II -5) Awilum seems to have been consisted of the citizens or the 'freeman', covering from the upper elite sub-class to the poor or ordinary sub-class, consisting the major of the society(Eq.(7)).
- (II -6) The transfer of rather homogeneous awilum class to highly

heterogeneous and broad class occurred during the period
(Table II -13a and Table II -13b).

- (II -7) Any awilum had, irrespective of his job, property, social position, absolutely equal legal status (H1)(3.4.4).
- (II -8) In the Sumer society muskenum was not existed as one of social classes with particular legal status (Table II -1). Muskenum seems a specific minority group in the Akkad period.
- (II -9) Muskenum has the legal status, equivalent to awilum (property right, home and family right), advantage to awilum (legal protection to muskenum, offence embezzlement, ...) and disadvantage with awilum (bodily injury, medical malpractice and compensation) (3.4.2).
- (II -10) Very significant disparity is recognized between the muskenum and the waradu (slave).(3.5.2).
- (II -11) The price of slave was estimated from the law codes (Table II -11).
Average price is 20 ± 5 siqlu.
- (II -12) Slave has some legal right such as the property right to make his own immovable and movables, the right of marriage and inheritance. Slave can get marry formally to awilum girl (3.5.6).
- (II -13) It was demonstrated that the high population density and the highly sophisticated system of the irrigation, together with the nation-wide great canal networks and the plow forming, did not fit to the simple monotonous labor work of the slaves.(3.6.2) .
- (II -14) The job specialization progressed, with acceleration, with time ;
Ur-Nammu → Lipit-Ishtar → Eshnunna → Hammurabi law codes
(Table II -14).

- (III -1) Tokens and their descendants (cuneiform script) were formed from practical demand, mainly, in agriculture.
- (III -2) The emergence of written-law requires as preconditions of inventions, their improvements of writings and their popularization of the writings in daily.
- (III -3) Except the E law code which was the shortest life (14~years) the life- span of ancient law codes ranges in 90~160 years.
- (III -4) To the newly conquered area (Larsa) new Babylon's laws were without delay applied.
- (III -5) Priests in the Hammurabi laws did not (play) or were not allowed to play an important role in the court.
- (III -6) The place of court was supposed to be palace when the articles contain the word 「god」 or the phrase 「in front of god」 .
- (III -7) There were a variety of courts differing the status.
- (III -8) Citizen's assembly acts as court, and the members of the assembly can play as role of a pseudo-barrister, and the decision is made by member's agreement.
- (III -9) Oath, appeared first in the Hammurabi law, continued for some thousands years to the present.
- (III -10) In the Hammurabi law perjury was the capital crime.
- (III -11) Two law articles (H23 and H24) are the world first law which aims to afford public support against criminal victims.
- (III -12) The compensation for malpractice are legislated.
- (III -13) Illegal damages to the misfortunes, such as house and ship, were recognized to be the object, which should be compensated.
- (III -14) Legal relief was attempted to support the social misfortune

including (1) war prisoner's family ,(2) war prisoner's child and (3) flood-victim, and draught-victim.

- (III -15) Embryonic idea of the human right emerged in the H law :
 - (1) Right to live, (2) Ownership and property right (buying and selling), and (3) Right of succession and (4) Right of access to court , (5) Equal protection of the laws, and (6) Liberty of contract.
- (III -16) Some parts of (UN, LI and E) are adopted into the H law although constituting only a small part (see, I -2).
- (III -17) The Hammurabi law code is not always perfectly consistent, but has three examples showing inconsistency.
- (III -18) In the H law code murder and rebellion are, curiously, not included in the death penalty.
- (III -19) In the three preceding laws (UN, L.I, and E laws) no article for legal processing is discovered.
- (III -20) Terms implying testimony, evidence and witness appeared in H law for the first time in the world legal history.
- (III -21) Plaintiff's responsibility of proof and defendant's right of disproof are written clearly.
- (III -22) First appearance of judge is observed in the H law.
- (III -23) The Hammurabi law is evidently based on the principle of evidence, and is absolutely differed from divine judge.
- (III -24) Process of accusation~judgement is clearly demonstrated in the Hammurabi law code.
- (III -25) One of judge's duties is the prohibition of double jeopardy.
- (III -26) The H law codes have a article with an original form of the prohibition of double jeopardy, which is now one of the

fundamental principles.

- (III -27) The function of summary court has at least in part, a kind of judge's function.
- (III -28) The four categories of the penalty were found in the Hammurabi law code. (1). Death, (2). Bodily punishment, (3). Fine, and (4). Banishment
- (III -29) The articles, in the Hammurabi law code, enough to be punished by death contain the four articles about dishonesty of the legal process.
- (III -30) Hammurabi laws illustrate numerous cases for single criminal conduct, but these cases are not enough to refer the article for judge at the actual trials.
- (III -31) There was an exceptional case where the retaliation law was not applied. In this case, the assailant was permitted by paying fine.
- (III -32) Invasion of theft into temple or palace and selling of the stolen goods were regarded as serious crime (grand larceny).
- (III -33) The penalty for the malpractice, committed by medical doctors and veterinarians, were regulated first in the world law history.
- (III -34) The product liability was recognized lawful in the case of house and ship which were the two major real estates.
- (III -35) The fifteen articles in Japan Penalty Code (JPC) inherited from one article in the Ur-Nammu, one article in the Lipit-Ishtar and twenty seven articles in the Hammurabi law codes.
- (III -36) The prerequisite necessary conditions for formal marriage, progressed steadily from cohabitation (UN) → cohabitation (for some period) (LI) → written oath (H).
- (III -37) Compensation money at divorce was stipulated in the laws (UN

and H laws).

- (III -38) The smallest unit constituting ancient Mesopotamia society is monogamy, formed by a combination of husband and wife.
- (III -39) Any combinations (theoretically, 9 types) of husband and wife are approved, regardless of their social class.
- (III -40) If husband did not recognize the slave's child, the child and his mother are liberated from slavery.
- (III -41) The size of farm seems to be fitted to the high level of irrigation and cultivation.
- (III -42) Personal (husband) property is succeed to his wife and children. Distribution of the property is actually based on the two principles : 'Equal share succession' under the limit of 'primogeniture'
- (III -43) Wife receives often a gift inter vivo (gift of property from husband, while he is alive). This is a form of division of property, which were built by co-operation of husband and his wife.
- (III -44) Recognized slave's son (bastard) can receive an equal share to other brothers (legitimacy).
- (III -45) When wife don't have dowry, she succeeds equal share to her children's.

IV -2 Methodology of the study

We employ as the primary materials the legible articles translated, literally from Sumerian or Akkadian into Japanese in the Iijima's works^{4,5} for LI⁶, E⁷, and H⁶ law codes and also the articles of the Un-Nammu (UN) law code, translated by Kobayashi⁵.

In this study (Part IV), economical laws regulating commercial and

agricultural activities are studied in detail.

(1) Cuneiform tablet as record medium.

(a) Cuneiform tablet.

(i) Cuneiform tablet (materials and production).

(ii) Writer of contract and place of safe-keeping.

(iii) Contracts made by ordinary people in the Old Babylonian period.

(b) buying and selling.

(c) contract between merchant (or landlord) and pennant farmer.

(2) Silver and barley as Currency.

(3) Pay, reward and lease.

(4) Merchant.

(5) Landlord.

(6) Other miscellaneous.

IV -3 Cuneiform tablet as record medium of contracts

3.1 Cuneiform tablet

3.1.1 Tablet and contract

In the Hammurabi law the clay tablets ((tuppa (H37, H41, H47), dubbim (H177), dappaam (H178), duppin (H179)) means always the contract document inscribed on the clay tablet. Evidently, the cuneiform tablet is a synonym of the contract.

3.1.2 Material, production and size

The clay tablet was made from dark fine sand and was in advance casted into sequence, rectangle or circle⁹. These dimensions are, for example, 4~5cm in the length, 2~3cm in the width¹⁰.

3.1.3 Writing, writer of private documents and place of safe-keeping

A. Writing : The wedge-shaped writing (the cuneiform script) was

adopted without exception.

B. Writer : Official documents on mainly the economical and administrative fields were written by the scripts at the public institutions in the Ur III dynasty. Shulgi had established school for the script. Ordinary people in the Old Babylonian period could read and write the cuneiform script. Cram school, where ordinary people learnt 'read-and-write', was demonstrated by excavations. For example, in the Ur AH district, a large number of Sumerian literature text and boards for exercise were excavated by C.L.Wooley^{11,12}. Then, in the period of Hammurabi it is supposed that ordinary people could 'read and write' the cuneiform scripts.

The society then was a society of the written contracts (see, Table IV-1). The rapid popularization of cram schools realized comparatively higher level of the literacy of ordinary people. It should be emphasized that 'reading-and-writing', capability was no more monopolized privilege of the script alone.

C. Safe-keeping : It was pointed out in Part III³ that peoples were asked to keep the documents, exemplified here, under safety. Otherwise, man cannot expect any equal protection of law (**Part III . 4.4.2. E**).

Table IV-1 indicates that in the Old Babylonian period the private contracts constituted a fundamental element of the social activity (in other words, the length and breadth of daily lives of man)³.

Numerous clay tablets on the contract documents of buying and selling of house (residence) were discovered by excavation just on their sites in Ur¹³ and Nippur¹⁴. One –to-one correspondence was confirmed^{13,14}. This means that the documents were kept in the house. where they lived in. Now, we know the name of the seller and the buyer

at most all the sites (see, **3.2 and Appendix A**).

3.1.4 Contracts made by ordinary people in the Old Babylonian period

Table IV-1 exemplifies various contracts probably made by an ordinary man during his life-spun in the Old Babylonian period.

Table IV-1 Various contracts made by an ordinate man during his life-spun in the Old Babylonian period

o	Contents	Law article	Remark
1	Buying and selling farm, orchard, house	H37, H40, H415	III[4.4.2 B]
2	Tenant farming	H42, H43, H44, H45, H47, H48	III[4.4.2 F]
3	a. Marriage b. Remarriage	H128, UN 11, H177	III[4.4.2 A], Table III-22
4	Loan (debt)	H49 (from merchant), H50, H51, H52, H100 (calculation of interest based on day)	
5	Merchant	H49, H50, H51, H100, H101, H102, H104, H105, H106, H107, H118, H119, H152	IV 6
6	a. Receipt b. Signature receipt	H104 H105	
7	Deposit a. with bond b. with witness	H122, H123 H124	
8	Dowry with clay tablet	H178, H179, H183	Table II-22
9.	Gift inter vivos (with deed) a. from husband b. from father	H150 H183	III[7.2.2.6]
10	Recognition of slave's child by his father	H171	III [7.3.1.5]

In the previous paper(Part III) the following five items on the family law had been examined in detail and will not be repeated here.

- (1) Marriage and remarriage (**3** in Table IV-1).
- (2) Dowry (**8** in Table IV-1).
- (3) Gift inter vivos (**9** in Table IV-1).
- (4) Recognition of slave's child (**10** in Table IV-1).

In this and succeeding papers the remaining items on the economical laws in Table IV-1 including

- (5) Buying and selling (**1** in Table IV-1).
- (6) Tenant farming (**2** in Table IV-1).
- (7) Loan (**4** in Table IV-1).
- (8) Merchant (**5** in Table IV-1).
- (9) Receipt (**6** in Table IV-1).
- (10) Deposit (**7** in Table IV-1).

will be discussed.

3.2 Buying and selling

People of all the social ranks, such as awilum (III **3.3.4**)¹⁵, muskenum (III **3.4.2**)¹⁶ and even slave (III **3.5.6**)¹⁷ have the right of selling and buying of the property, including farm, land and house¹⁸. But, there were some exceptions, where buying and selling of the properties are prohibited (Table IV-2).

The lands, farms, and houses, all allocated by king for soldiers, policemen, and tax-collectors, were not allowed to sell them to others (Table IV-2), or to present them to his wife or daughter. Of course, it is no wonder that if their children take the same job as their fathers the

children can inherit virtually from their fathers. Articles, that people cannot sell the property king gave, might be probably the most fair.

Note that king had been regarded as the final landowner in Europe at middle ages and interestingly, the situation was almost the same even Mesopotamia some thousand years earlier than Europe middle ages¹⁹. Even at present time many people (say, some tens percent of global population), including China, have no final ownership of land.

But there are some exceptions against the above-mentioned exceptions (Table IV-2).

Such an existence of some exceptional articles to the exceptional regulations (Table IV-2) is one of features characterizing ancient

Table IV-2 Prohibition and regulations of buying and selling property

Article no.	Content
H35	Soldier cannot sell, with silver, cattle which king denoted before
H36	Soldiers, policemen, and tax collectors cannot sell farm, orchard and house for silver
H37	Contracts of selling and buying between public officers(soldiers, policeman, and tax collectors) and persons are annulled, and the silver, paid for the dealing, is confiscated.
H38	Public officers such as soldiers, policeman and tax collectors, cannot alienate their farm, orchard and house to their wives and daughters.
H39	Farm, orchard and house, which were bought by soldier, policeman, and tax collectors, can be sold for their own debt.
H40	Nun, merchant and enterpriser can sell farm, orchard and house -- .
H41	When security of selling-and-buying contract is given (by others), soldiers, policemen and tax collectors can possess the above property.

Mesopotamia laws. H28 (inheritance by wife from the husband who is a war prisoner when her son is too young to manage the farm and orchard).

From 'buying and selling' contract records (see, Appendix A)²⁰, it became evident that a strict application of 'Primogeniture' principal (H165) seems rather limited. In Appendix A House I, where whole rooms owned by a father, were approximately equally divided into the four children (boys): two rooms for his first son, two rooms for the second son, three rooms for the third son and a room for the youngest son. After ten years the youngest son alone held three rooms. 'Buying and selling' were very frequent (at least, on our common knowledge) due to large social change (large riots occurred in 1739 BC at many parts of Mesopotamia).

3.3 Tenant farming contract

Tenant farmers were a majority of workers in the ancient Mesopotamia.

A tremendously large number of tenant contracts for each family had been preserved in the district, where he lived. These contracts were regarded as effectual, in spite of change in dynasties (for example, from Rim-Sin's Lasa dynasty to Hammurabi's Babylon in 1763²¹). Of course, although powerful supporters to the former dynasty were down fell, the contracts of sub-tenants were valid as they were. Shamsh-hazir was an official, appointed by Hammurabi, whose duty was to check the registers of tenants contract and determine its effect²². He managed king's farm in the area of ex-Larsa. Hammurabi continued many of leases that had been held under Rim-Sin. In a letter(?) the official Lu-Ninurta pointed out to Shamsh-hazir that their men (tenant farmers) have had that field for

twenty years already²³.

Many letters of complains, directly sent to Hammurabi from farmers, had been discovered. For example²⁴ : During the absence of the husband, participated to war, their farm was taken over by others.

Format and terminology for the public documents had been almost unified at the time of Shulgi's reign (Ur III dynasty). However, formula for the tenant contract, including the name of tenant farmer, the location of farm, its size, the effective term, and division ration of the profit, is unknown for us.

The tenant contracts were, together with 'buying and selling' contracts, the quite important documents, which should be kept with great attention at home. A copy of the contract was also held at the landlord house, probably in the form of a registered collection of the tenant documents of all the peasant farmers.

3.4 Out break of contract

Majority of economic activities was guaranteed by the numerous contracts. One example is the contract of tenant formed between landlord and farmers. If the above-mentioned contracts are not well operated, the economy of the society will meet sever obstacle. Hammurabi law demands perfect fulfillment of the contract and if unfillment of the contract occurred (violated contract) such unfillment was regarded as economical illegality and the compensation by creditor for debtor's economical damage was severely required. Commercial and agricultural illegalities are examined in the forthcoming paper section (Part V).

IV-4 Currency and Money

4.1 Currency

First of all, definition of currency and money are confirmed here :

Currency is defined roughly as the things which are approved by laws as media of exchange of commodities and are distributed virtually²⁵.

Money is a method of circulation for payment of obligation and consideration of goods. Even if money has not its material value the money can be circulated with its nominal value engraved on its surface²⁵.

Table IV-3 collects the amounts (expressed in sila) of goods, including vegetable oil of high purity, pig fat, oil of river, sheep fat, salt, lime, copper and refined copper in the Eshnunna law code (E1), all equivalent to silver one siqlu. Here, detail of oil river (ID₂) is not known unfortunately.

In other words, the figure in the table means the amount (expressed as sila) of goods which can be purchased by silver one siqlu. Then, Table IV-3 is another expression of the relative price list, and silver acts as metal currency. In the table, 1 gur barley was a priori determined, to be equivalent with silver 1 siqlu ;

$$1 \text{ gur barley} = 1 \text{ siqlu silver} \quad (1)$$

From Table IV-3 we know

- (1) Price of salt is about a half of barley.
- (2) Price of silver is 180 times of copper and is 120 times of refined copper.

One siqlu silver = 3 mana copper.

- (3) 1 siqlu is $505 \text{ (gr/mana)}/60 \text{ (mana/siqlu)} = 8.41 \text{ (gr/siqlu)}$.

- (4) One siqlu silver is now ¥462.55 ((silver is now about ¥55/gr).

Table IV-3 The amount (volume) of goods equivalent with one siqlu silver (Eshnunna law code , E1)

Goods	Amount of goods equal value to silver one siqlu	Volume (L) and weight (g) of goods equivalent with one gram of silver (gs)	Price ratio
Barley	1 gur (121L)	14.4 L/gs	1
Fine quality oil	3 sila (2.53L)	0.30 L/gs	48
Sesame oil	8 sila (6.74L)	0.80 L/gs	18
Pig fat	11 sila (9.26L)	1.10 L/gs	13
Oil of river	14 sila (11.8L)	1.40 L/gs	10
Sheep fat	2 gur (242L)	28.8 L/gs	0.5
Salt	2 gur (242L)	28.8 L/gs	0.5
Lime	1 gur (121L)	14.4 L/gs	1
Copper	3 mana(1.5kg)	181 L/gs	-
Refined copper	2 mana (1.0kg)	120 L/gs	-

Table IV -4 The amount of barley (expressed in sila) equivalent with one sila goods

Goods	Amount of barley (sila) equivalent with goods of one sila(E2)
Vegetable oil (high quality)	18
Pig fat	17
Oil of river	8

(5) With one mana silver we can buy 1.515kg of refined copper.

4.2 Barley and silver as commodity means

4.2.1 Equivalence of barley and silver

Table IV-5 illustrates the two articles showing the equivalence of barley and silver in the Eshnunna code:

E3 : lent of (cart + ox + driver) is barley 60 sila/day, or silver 1/3 siqlu silver /day (see, Table IV-12).

E7 : pay for laborer at harvest is barley 12 sila barley /day or silver 12

Še./day (see, Table IV-10).

From Table IV-5 the equation (2) is derived.

$$1 \text{ sila barley} = 1 \text{ Še silver} \quad (2)$$

Eq. 2 can be compared with the equation (1) ;

$$1 \text{ gur barley} = 1 \text{ siglu silver} \quad (1)$$

If we employ the conversion equation ;

$$1 \text{ gur} = 144 \text{ sila} \quad (\text{Pichot. P62})^{26} \quad (3)$$

we obtain for the equation (2)

$$1 \text{ sila barley} = 180/144 \text{ Še silver} = 1.25 \text{ Še silver} \quad (4)$$

and if we use equation (5) in places of the equation (3)

$$1 \text{ gur} = 5,0 \text{ sila} = 5 \times 60 \text{ sila} = 300 \text{ sila} \quad (\text{Muroi, p31})^{27} \quad (5)$$

we obtain for the quation (2)

$$1 \text{ sila barley} = 180/300 \text{ Še silver} = 0.6 \text{ Še silver} \quad (6)$$

Both authors (Pichot and Muroi) did not quote the original source for the equation (3) or (5), then I cannot decide which equation (eq.(4) or (6)) is reliable.

Eqs. (1) and (2) are, in the strict sense, not consistent each other, but an approximate equation

$$1 \text{ sila barley} \simeq 1 \text{ Še silvers} \quad (7)$$

holds its validity.

Table IV-5 Equivalence of barley and silver in the Eshnunna code

Article	Barley	Silver	Note
E 3	barley 60 sila	silver 1/3 siglu	rent of coach, cow and driver's fee
E 7	barley 12 sila	silver 12 se	pay at harvest

It is easily demonstrated that E3 and E7 are the same.

Table IV-3~5 shows also the relative of price of the commodities in market. Then, the table is considered to be a measure (i.e., ratio=relative 'price') of barter in those days.

4.2.2 What is 'price' in Tables IV-3~5 ?

The meaning of 'price' is very vague , having the possibility of the following various meanings.

- (A) Official price; (B) Market price ; (C) Standard price; (4) Maximum (upper limit) price.

The price of goods was, more or less, uncontrollable by the officials. Mesopotamia society was not completely a society based on the market-oriented economy. In Mesopotamia then the mechanism of distribution of goods was at the stage of immaturity. The majority of the goods listed in Table IV-3~IV-5 were extremely climate-sensitive. For example, the market prices of barley sharply jumped in the case of shortage of the barley supply, caused by bad weather or natural disaster (see, for example, Appendix A). Then, barley, the most important food, was officially supplied to individuals.

During the middle of the third millennium and ca.1380 BC many Mesopotamia governors(kings) had attempted to make the price list for major commodity goods.

A. Official price

- (i) Lugalzagesi of Urk's legislation ;

Payments of civil officer and laborer²⁸.

- (ii) Attahusa of Susa :

Stone of justice (1380BC), official price of goods²⁸.

(iii) Shamushi-Adad I of Assyria (about 1808-1776BC) :

Inscription of the price table²⁸.

B. Market price

Ijima stated that the article E1 exhibits (market) price at that time²⁹.

C. Standard price

Sin-iderum of Larsa (1849-43BC), Warad-Sin (1834-23BC), and Rim Sin I (1822-1763 BC) proclaimed the standard prices of goods³⁰.

D. Maximum price

Kin-Kusid declared list of maximum price of major commodities (corn, oil, and wool)³¹.

4.3 First appearance and its frequency of barley and silver as currency

Table IV-6 demonstrates examples of the first appearance and its frequency of barley and silver in the four law codes.

Barley had been the most abundant commodity, which anybody easily access to and were widely utilized in the daily barter, without recognition (of barley) as currency. This may be the most probable explanation for the absent of barley from the UN and LI laws. After the Eshnunna laws barley was recognized (E2 and E3) formally as the commodity money. Silver is the old-established money currency, since Ur III dynasty. Silver was originally used as the metal currency. Silver was undoubtedly the main and first currency.

Invention and its popularization of metal currency require that the following two factors are satisfied in advance.

- A. establishment of metal refinement procedure
- and B. introduction of new method for measuring weight of silver.

The above prerequisite conditions had been satisfied, as least, in the third millennium BC.

A. Purification of silver by refinement :

The silver initially presents as contaminates in the ores of lead, galena in the form of silver sulphide, which was reduced to the metal and could be recovered from the ash by washing.

B. New metrology :

Shulgi (king of Ur III dynasty) introduced new metrology (weight and measures) by unifying local old systems.

C. Coins : Advance of silver currency to coins

Coins are defined as pieces of the metal guaranteed weight and purity, stamped with mark of the issuing authority, first appeared in the seventh century BC.

Silvers in Mesopotamia as 'coins' are different from 'above coins' in the point whether the mark is stamped or not. International money was silver coin. The earliest surviving coins, dating from the seventh century BC, came from Asia Minor. Mesopotamian (in particular, Assyrian) merchants had strong connection of the long-distance trade with the district near to Minor, exporting high quality products made in Mesopotamia and importing crude mineral cores (silver), wood and stone from the district, not far from Asia Minor.

Settlement was done by the silver currency made in Babylonia (which is the most advantageous media to long distance trade at that time). Then we cannot agree that the stamping of the mark by issuing authority (for example, king) is a revolutionary invention. A minor additional improvement happened to bring about an immense effect on afterward economic society.

Tomimura described in his book³² that in Sumer and Akkad periods of the Mesopotamia the media of goods-exchange had entirely been barley and in the Hammurabi's dynasty blocks of copper and silver became first new commodity currency. Table IV-6 indicates that his above statement seems obviously not true, because in the Hammurabi law code as well as other three precedent laws any word of copper was not discovered, suggesting that copper had never been employed as currency in the Mesopotamia.,

Table IV-6 Barley and silver utilized as currency in UN, LI, E, and H laws

UN		LI		E		H	
Barley	Silver	Barley	Silver	Barley	Silver	Barley	Silver
	UN8		LI 9	E1	E1	H44	H17,H24
	UN9		LI 10	E3	E3	H53	H35~37,H49
	UN10		LI 13	E4	E6	H54	H50,H54,H100,
	UN14			E7	E7	H56	
	UN18			E8	E9	H57	H101,H102,H104,
	UN19			E9A	E11	H58	H106,H107,H112,
	UN20			E10	E12	H63	H114,H116,H118,
	UN22			E18	E13	H121	H119,H138,
				E20	E14	H242	H139,H146,
					E18	H243	H156,H171,H177,
					E20	H257	H198,H201,
					E21	H258	H204,H207,H208,
					E31	H261	H209,H211~217,
					E42~48	H268	H220~224, H228
					E54~59	H269	H233,
						H271	H234,H238,
						H272	H241,H252,
							H259,H260,
							H273~277,
							H51*
Σ	0	8	0	3	9	25	16
							62

H51*; in place of silver when silver cannot be used.

4.4 Categories where silver or barley was exclusively employed as major currencies

Table IV-7 Use of silver as one of the two major currencies appeared in the laws

No. Use	Article no.			
	UN	LI	E	H
1. Fine and compensation[12]	UN8	LI9,LI10, LI 13	E 31	H12,H13,H24,H114, H116, H259, H260
2. Bodily injury [22]	UN14,UN18, UN19,UN20, UN22		E42,E43, E44,E45, E46,E57	H198, H199, H201, H203, H204, H207, H208, H209, H211, H212, H213
3. Pay ; daily and monthly [6]			E9, E11	H273, H274, H275, H276
4. Contingent fee [10]				H24,H63,H64,H215, H216, H217, H221, H222, H228, H234
5. Lease [6]			E4*,	H100, H101, H102, H276*, H277*
6. Deposit fee [1]				H121
7. Dealing (commercial)[5]				H104, H106, H107, H112, H114
8. Divorce [4]	UN9, UN10 :			H138, H139
9. Misconduct [1]				H59 (tree)
10. Medical treatment [7]				H215, H216, H219, H221, H222, H223, H224
11. Medical failure[6]				H216, H217, H218, H219, H220, H225
12. Product liability [6] a. house ; b. ship ;				H229, H230, H231, H232, H233, H235

* ; boat , [] ; number of articles

Silver had been used over a quite wide range of the eleven categories, covering almost whole social life except agriculture. Now it is clear that utilization of silver as currency became rapidly popular, such as fine and compensation (1, 2 in table IX-7), daily and monthly payments and reward for achievement (3, 4), lease and monthly deposit fee (5,6), dealing (7), divorce (8), misconduct (9), medical treatment and its failure (10,11), and product liability (12).

Table IV-8 summarizes the categories where barley was exclusively used as one of the two currencies.

Table IV-8 Use of barley as one of the two currencies, appeared in the laws

No.	Use	UN	LI	E	H
1.	Annual salary [2]				H257, H258
2.	Pay for achievements [6]				H60~65
3.	Land lent [6]				H42,H43,H46, H49, H50, H51
4.	Economical Negligence [6]				H43,H44,H53, H54, H55, H56
5.	conomical misconduct [2]				H57, H58
6.	Lease [15]			E3, E4,	H242,H243,H244, H245,H246,H247, H248,H249,H268, H269,H270,H271, H272

[] : number of the articles

Barley was used only in comparatively limited number of the categories.

Category 1 is for agricultural regular employee having the duty to work one year long.

Category 2 is for gardener, who is not a simple day-laborer, but a kind of partner, receiving the portion of the crop as a share.

Category 3 is for many tenant farmers.

Category 4 is negligence of tenant farmer.

Category 5 is farmer's misconduct in water-way maintenance.

Category 6 is lease of ox.

It is now evident that barley was used as currency in only agriculture and its related categories and in the Hammurabi age barley was only a substitute currency.

The key terminology charactering the two currencies can be shortly summarized below :

A. Barley : ① money by volume, ② commodity currency, ③ alternative (or substitute)currency, ④ barley (food), ⑤ troublesome to carry, ⑥ highly climate (drought, storm, flood,•••) sensitive harvest.

B. Silver : ① money by weight, ② metal currency, ③ real money, (→ casted coin), ④ key and major currency, ⑤ high density (small volume), ⑥ suitability of the long-distance trading with safety, ⑦ resistance to fire, ⑧ less sensitivity of money value upon the market price of climate-sensitive agricultural products, ⑨ stability of quality of material against elapsed time.

The third currency might be sesame, cultivated together with corn in farm. The sesame was used when a debtor had not silver (H51).

In the Eshnunna laws it was approved for debtor to use barley

equivalent with when the debtor tried to pay back his debt to the creditor, but had not silver (E19, E20).

The maximum amount of payment in silver is one mana (Un9, UN19, E42, H24 and H203). One mana is 505 gram. On the other hand, the minimum amounts of payment in silver are daily pay for day-laborer, ranging 4~6 Še/ day(see Table IV -9). One mana corresponds to 60 siqlu and one siqlu is 180 Še. Then, 1 mana = 60 (siqlu/mana) × 180 (Še/siqlu) = 10800 Še/mana. Accordingly, 1 Še = 505 (g/mana) / 10800(Še / mana.) = 0.047gr/ Še = 47 mg silver. Provided that the daily pay is 5 Še/ day, the weight in gram of 5 Še/day = 5 Še/day × 47 (mg/ Še) = 23.5 mg/ day. The daily pay is converted to the weekly pay (note: the week system is not confirmed to exist !) : 235 (mg/day) × 6 day-work/ week = 1.41 gr silver/week. A silver block, for laborer's one week work, (1.4gr), which is somewhat heavier than Japanese one yen coin (~ 1 gr/coin), seems a little small to use practically.

When barley currency is used for the payment, its maximum amount for the annual fee is 8 gur barley (= 8 gur) × 121.5 (ℓ/gur) = 970 ℓ barley) ≈ 1000 ℓ barley. If we pay the above fee in silver, barley 8 gur = silver 8 siqlu (see, eq.1) (=505 (gr/mana) × 8/60 (siqlu/mana) = 67.3 gr = 67.3 / 10.49(gr/ cm³)) = 7.06cc ≈ 0.71ℓ.

IV-5 Commerce

5.1 Pay and Reward

5.1.1 Pay and reward in the Eshnunna and Hammurabi laws

Table IV-9 summarizes pay and reward regulated in the Eshnunna and Hammurabi law codes.

Table IV-9 Pay and reward

	Pay and reward	
	Eshnunna law code	Hammurabi law code
(1) Annual income		
a. boatman		barley 6 gur(1800sila)/year(H239)
b. cultivator		barley 7 gur(2100sila)/year(H292)
c. cattleman		barley 6 gur(1800sila)/year(H258)
d. shepherd		barley 8 gur(2400sila)/year(H261)
(2) Monthly pay	silver 1 siqlu/month (E11)	
a. Day laborer		
(3) Daily wages		
a. carpenter		silver 4 še/day (H274)
leather tanner		
b. brick caster		silver 5 še/day (H274)
c. day-laborer (June–December)		silver 5 še/day (H273)
d. coachman	barley 6 sila/day(E10)	
e. barley-sieve	barley 6 sila/day (E8)	
f. day laborer (January–May)		silver 6 še/day (H273)

Table IV-9 (continued)

<p>(4) Reward for achievement (contingent fee) a. carpenter (house) b. ship wright (ship) c. doctor (medical bill) c1.surgical operation with bronze knife (wound : tumor at eye) c2.fracture treatment c3.treatment of intestine disease (internal medicine) d. veterinarian operation for cow, donkey e gardener e1.gardener: cultivation of wild field e2.gardener : orchard e3.gardener</p>	<p>silver 2 siqlu/site area of 1 sar(H228) silver 2 siqlu/site area of 1 sar(H228)</p> <p>[silver 10 siqlu for awilum patient (H215) silver 5 siqlu for muskenum (H216) silver 2 siqlu for waradu (H217)</p> <p>[silver 5 siqlu for awilum (H221) silver 3 siqlu for muskenum (H222) silver 2 siqlu for waradu (H224)</p> <p>[silver 5 siqlu for awilum (H221) silver 3 siqlu for muskenum (H222) silver 2 siqlu for waradu (H222) silver 1/6 siqlu (H224)</p> <p>first year; barley 1 gur/10iku(600m²)(H63)</p> <p>management ; 1/3 of harvest (2/3 is for owner of orchard)(H64)</p> <p>after 4 years since plantation;1/2 of the harvest for the gardener and 1/2 is for the owner(H60)</p>
--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

5.1.2 Conversion of pays

a. Preconditions for conversion of daily pays to annual income

We assume that ;

1. Labor days in a year is 300 days (10 month) (other 2 month is for rest).
2. Regulations of time are year, month, and day. In the laws no word on 'week' was found and weekly pay was not taken into consideration.
3. There was no regulation on working hour in a day. So we can

presume naturally, 'From sunrise to sunset'.

b. Conversion of annual and monthly incomes to daily pay

Annual income was exclusively paid on the barley basis, which can be transformed to silver base using eqs.1 and 3 and the prerequisite mentioned before. As the results: Barley 8, 7 and 6 gur/year are converted to silver 2.30, 2.02, and 1.73 Še/day respectively, which can be compared with daily wages ((3) in Table IV-9), and reward for achievement ((4) in Table IV-9).

Monthly pay for day-laborer is silver 1 siqlu /month. This is equivalent with silver 7.2 Še/day. In this case. one-month-work was assumed to correspond to 25-days-work (300days work / year = 25 day work / month).

c. Conversion of silver Še to silver gram

Silver 4, 5 and 6 Še (see, Table IV-9) are equivalent with silver 0.19, 0.23, and 0.28 gr, respectively. Bills of the surgical operation are equivalent with 450, 360, and 300 days-work for the daily workers earning 4, 5, and 6 Še /day, respectively. These correspond to daily worker's 1.5, 1.2 and 1.0 year income, respectively. Then, roughly speaking, a typical operation costs one year~ one-and-half years income of a craftsman.

5.1.3 Craftsman

The income of craft men are not much varied among their job's specifications. Pay of day-laborer seems a little higher than those of the above-mentioned craftsman. But, we should pay an attention to the total days, which enables them to work, in one year for day-laborers. Their labor was limited only to the busiest season for the farmers. In

particular, pay of day-laborer was higher in mid-winter ~ later spring than that in late summer to early winter. It is easily supposed that the pay may have a strong connection with agricultural almanac. Winter cultivation' had a longer history (single-crop had started in the rain-fed agriculture) than 'summer cultivation ' (double-crop) in Mesopotamia. In the Hammurabi law code, following names were discovered (H274) ; brick caster, flax-workman, malt brewer, milkman, black smith, carpenter, leather tanner, reed-workman, and builder. Here, the distinction between carpenter (--ella) and builder (bānim) is not clear. Milkman (or amelan ga') may be cheese or butter workman. Flax-workman may be flax-cultivator (farmer?) or craftsman of flax yarn or flax-textile engineer.

5.1.4 Medical doctor

a. Medical doctor

Medical doctor's income is, as expected, prominently high. Note that the the operation had not been performed by a doctor alone, but surgical assistants (i.e., apprentices) assisted their master. It is very probable that, at the period, any medical education had not been practiced and only traditional master-apprentices-ship system practically worked. The operation could be carried out (maximum) twice a day and doctor's apprentices were life-supported by their master and received a small money for the operation. Utilization of anesthetic (local) is not clear, although its possibility cannot be absolutely denied, because at that time people had some knowledge about many kinds of stones, plants and glasses having pharmacological activities, applying for general treatment (H221). Medical doctor earns silver 10 siqlu for a

surgical operation to an awilum patient. Award differs depending on patient's social positions. Silver 10 siqlu is $10 \text{ (siqlu)} \times (505 \text{ gr} / 60 \text{ siqlu}) = \text{silver } 84 \text{ gr}$. At present, 1 gr of silver costs about 57/g. Then, 10 siqlu is $\text{¥}57 \text{ (¥/g)} \times 84 \text{ (g} / 10 \text{ siqlu)} = \text{¥}4788$.

b. Surgeon and doctor of internal medicine

In the Hammurabi law code, there is no distinction between surgeon and doctor of internal medicine, both called as 'azu' (H214, H215, H217, H218, H219, H220, H221).

Amount of awards for medical doctor depends, of course, on the kinds of the treatment. Bill of surgical operations of the removal of tumor and the suture of injury was twice of the treatment of the fracture or intestine (Table IV-9 ; H215, H221).

c. Failure of surgical operation

In the following cases surgical operations may be judged as failure.

- (1) During operation or immediately after the operating the patient died.
- (2) The patient died, without recovering , few days ~ one week after the operation, due to syndromes such as suppuration and hemorrhage caused by the operation.

d. Author's small experience

The author received a surgical operation in 2015:

Patient name and age : K. K., 81.

Operation : Removal of a tumor on left upper eyelid under local anesthesia with pathological diagnosis (Melanocytic nevus).

(This is, surprisingly, an almost identical disease name with that in the Hammurabi law article H215 ; (lu nagabti awilum ina girzal siparrim iptema iin awilum••••)).

Expense ; Extract 1702 point ; diagnosis 1010 point ; total 2712 point
(health insurance) \simeq ¥2712 . Patient pay (10%) ¥2712.

5.1.5 Ship-builder

$60 \text{ gur} = 60 \times 144 \text{ sila} = 8640 \text{ sila} = 60 \text{ (gur)} \times 121.25 \text{ (} \ell \text{ /gur)} = 7275 \ell \simeq$
7.2 ton

A 60 gur – capacity ship \simeq 7.2 ton-capacity ship.

Reward of 7.2 ton ship – building is 1 siqlu (H228).

Provided that the ship was built in one month, ship-carpenter is awarded
1 siqlu/ month= $1 \times 180/25 = 7.2 \text{ Še /day}$. All materials needed for ship-
building, such as wood, were supplied directly to the ship-carpenter by
the man commissioned to build it. Since ship-building was performed in
this master-apprentice system, all (total) pay was not taken by the
master alone.

5.2 Comparison of pays in the Eshnunna law code with those in the Hammurabi law code

Table IV-10 collects comparison of pays in the E law code with those in
the H law code.

(1) b is the case where eq(7) is applied to E7.

In (3)a if equation (1) is valid, pay in E 11 (that is silver 12 siqlu/yen =
barley 12 gur/yen) is twice of the pay in H258.

In (5) pay in E10 coincides with pay for season Jan.~May in H272.

At harvest the labor was hard work, then was highly paid (about twice)
(E8 and E7).

Agricultural laborer, who was employed for one year, is payed annually
with barley. Par-time laborer, employed as a temporarily simple laborer

Table IV-10 Comparison of pays in the Eshnunna law code with those in Hammurabi law code

Job	Eshnunna law code	Hammurabi law code
(1) Laborer a. barley-sieve b. harvest	barley 6 sila/day (E8) barley 12 sila/day or silver 12 še/day (E7)	
(2) Farmer a. cultivation		barley 7 gur/year (H257)
(3) Cattle man a. cattle	silver 1 siqlu/month(E11) (silver 12 siqlu/year)	barley 6 gur/year (H258)
(4) Herdsmen a. cow, sheep(keeping) coachman		barley 8 gur/year (H261)
(5) Day laborer	barley 6 sila/day (E10)	Jan~May : silver 6 še (H272) Jun~Dec ; silver 5 še (H272)

Table IV-11 Lease

	Lease	
	Eshnunna law code	Hammurabi law code
(1) ox with harrow		barley 4 gur/year (H242)
(2) ox and cow, body connected		barley 4 gur/year (H243)
(3) ox (threshing)		barley 2 sila/day (H268)
(4) donkey (threshing)	barley 6 sila/day (E10)	barley 10 sila/day (H269)
(5) lamb (threshing)		barley 1 sila/day (H270)
(6) ox, cart	barley 60 sila/day silver 1/3 siqlu/day(E3)	barley 180 sila/day (H271)
(7) cart		barley 40 sila/day (H272)
(8) sickle(scythe)	barley 11 sila/day (E9A)	
(9) boat	barley 2 sila/day for 1 gur (E4)	

at harvest, was paid daily.

5.3 Lease

Table IV-11 collects the lease of domestic animals, such as ox, cow, donkey, and lamb, for agriculture and transporting media including cart and ship.

The two cases, case (4) and case (6) in the table, enables us to compare the lease at different periods.

In case (4) lease of donkey in the Eshunnuna law (6sila/day) increased by 166% up to sila/day in the Hammurabi law (H269). In case (6) lease of (ox + cart + cartman) (E3) jumped triple from 60 sila/day to 180 sila/day.

IV-6 Merchant

6.1 Merchants in the Old Babylonian period

In the Hammurabi laws the 22 articles, which are concerned with 'merchant' (tamkarum) are discovered : (ransam) H32; (buy and selling) H40 ; (farmer) H49, H50, H51, and H52, ; (salesman)H101, H102, H103, H104, H105,H106, and H107 ; (carrier) H112 ; (loan) H113 ; (hostage) H115, H116, H117, H118, and H119 ; (deposit) H120 and H121.

It is clear that in the Hammurabi law the above articles, are major. In other words, merchant, together with farmers (landlord), became to play an essential sector in the old Babylonia period.

Chart 1 shows roles of the merchant and landlord. The merchant had the close connections with ordinary people (family) (① in the chart), salesman (retailer) (② and ③ in the chart) and tenant farmer (③, ⑦ in

the chart).

Chart 2 shows the relations between the agriculture and the commerce in the Old Babylonia period. The two charts are a little over-simplified with neglect of minor numerous factors contributing to the two majors, agriculture and commerce.

Mesopotamia had a scanty of indispensable natural resources such as wood, stone, mineral matters (gold, silver, copper and tin •••) to keep a high standard of living.

Therefore, these materials had to be imported from elsewhere, even if it was remote from Mesopotamia (for example, Asia Minor). Fortunately

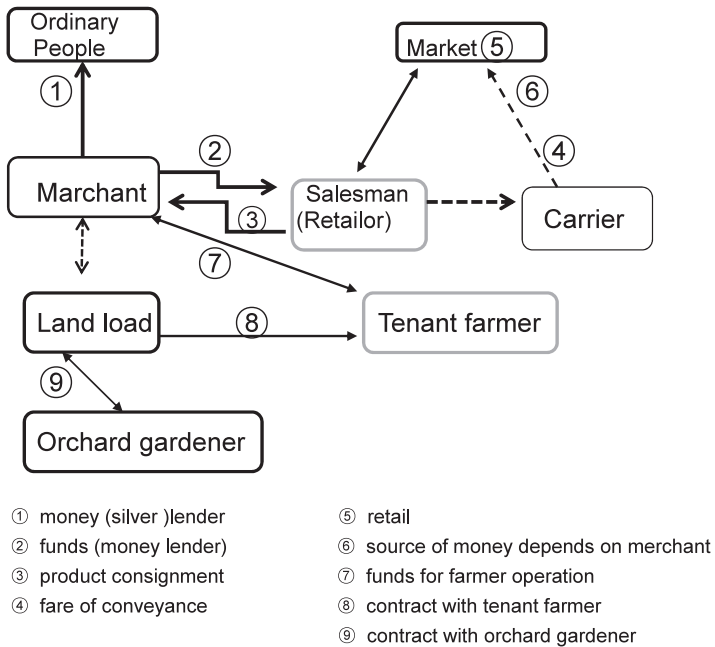


Chart 1. Roles of merchant and landlord

Mesopotamia was prosperous in the development of a very sophisticated system of barley cultivation with aid of largescale irrigation technology to produce, with high productivity, the large amount of agricultural products (barley, date palm and wool), which enabled to barter with the natural resources mentioned above.

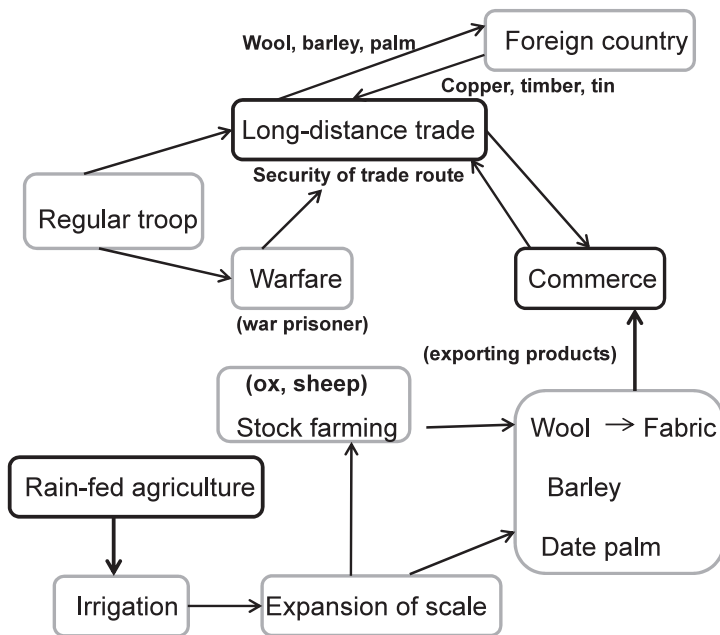


Chart 2. Agriculture and Commerce

6.2 Merchant's activities

6.2.1 Finance

In the Old Babylonia period the merchants had a kind of financial activities (mainly loans), which can be called as 'proto-banking'.

A. Private finance to ordinary family (H152)



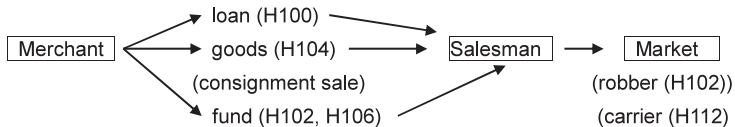
Merchant lends silver to family on security (including their family). Typical pledges were family members (wife and children) (H117), and slave (H118,H119).

The distinction among pledges, pawn (H114) and hostage (H115, H116) are not clear.

B. Finance to business

a. small business (loan to tenant farmer) (H48~H51)

b. large business (trading)



C. Investment to business (trading)

(See, also 6.2.2.B)

The eight articles (H100~ H107) in the Hammurabi laws on business relations (the dealings and troubles) between merchant (tamkarun) and salesman (Šamallum) are closely related with the long-distance trading, indicating its importance in the society then.

6.2.2 Long-distance trading

A. Exchange of goods

Merchant has a function of transportation or exchange of goods. An increase of the value of the goods by exchange or transportation brings about money.

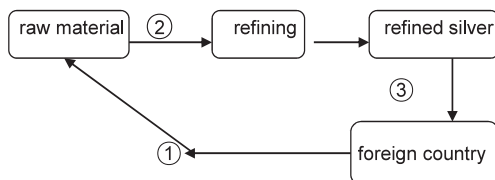
B. Long-distance trading

Long-distance trade was a characteristic commerce in the Old Babylonian period, requiring substantial maintenance of high security of whole route by the regular troop.

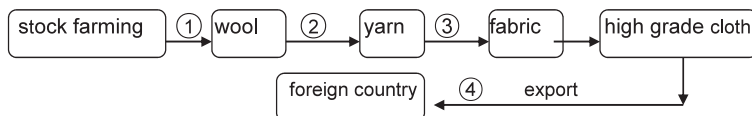
The specular natural environments in Mesopotamia accelerate the technological advance leading to the processing industry and development of the commerce business by long-distance trading.

There are two types of national economical system as follows :

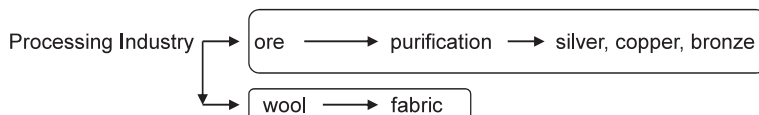
(Type 1) : Import of raw material ↔ export of product



(Type 2) : Self - support of raw material → export of product



Common conditions for success of the above are incomparably high level of the processing industry.



(Type 1)

- ① Import of raw materials.
- ② refinement of the raw materials (processing industry).
- ③ export of refined goods.

(Type 2)

- ① wool (raw materials) from stock-farming (self-supplier).
- ② production of yarn from wool (spinning).
- ③ production of fabric from yarn (weaving).
- ④ export of high class fabric.

Step ② in Type 1 and steps ② and ③ in Type 2 are the cutting-edge technology.

Profit and loss in the long-distance trade

Case 1 : (i) merchant supplied fund to salesman.

(ii) **the business ended in loss.**

(iii) the sales man returns the fund without interest to merchant (H102).

Case 2 : (i) merchant rent silver to salesman.

(ii) **the business resulted in failure (but not loss).**

(iii) the salesman returns twice of the money borrowed to the merchant (H101)

It is clear that merchants are guaranteed by laws that they will never lose their fund offered to the salesman, regardless of their business results.

Case 3 : we can image a measure of average profit in a long-distance trade from Kishimoto's book⁴⁰.

(i) (Assyrian) merchants purchased 20 siqlu (weight) tin blocks (at Babylonia) at price of one siqlu silver, immediately after collapse of Ur III dynasty (and about 150~200 years before

the Hammurabi's reign).

(ii) They transported the above tin blocks (to eastern highland of Asia Minor).

(iii) They sold the tin at price of 10~6 siqlu (weight) per one siqlu silver to the natives there.

(iv) Assyrian merchants succeeded to increase their fund double or more than triple : Then, the business can be considered as 'moderate dealing'.

(Note that parenthesis in (i) ~ (iv) are my deduced insertion)

6.3 Merchant and farmer

Table IV-2 demonstrates some instances of unfillment of the contract between merchant and farmer.

Table IV -12 Some examples of unfillment of the contracts between merchant and farmer

Owner(creditor) VS Borrower (debtor)	Cause of troubles → Results	Article no.
case1 Merchant vs farmer	debt(money); → cultivation of borrower's farm by merchant → at harvest, payment of the debt, plus interest, and the cultivation cost (in form of barley) to merchant	H49
case2 Merchant vs farmer	debt(money) ; when farmer borrowed money after harvest, payment of the debt plus interest (silver money) only to merchant is allowed	H50
case3 Case2 plus	the borrower has not silver → the payment of sesame, based on the king's conversion table, is allowed	H51
case4 Case1 plus	even no harvest → contract is not changed	H52

6.4 Merchant and landlords

There is no article in the Hammurabi law code showing any connections between landlords and merchant, but this does not mean that there was nothing between them. The truth is completely the reverse.

The landlords had been consisted of the public institution (palace) and the private institution³³, although the ratio of the both is not clear. It is said that in the Old Babylonian period private enterprises developed particularly and the big merchants emerged, leaving numerous documents on economical matters³⁴.

The merchants in the Old Babylonian period can be classified into merchant officers, who are the officer serving to the king, and other civil merchants. The former was naturally a member of public institution (landlords) and was in charge of the export business of large amount of barley, sesame oil, date palm, and wool, all collected (by tax collector, see Table III -2) as the taxes and the tenant fees from the farmers³⁵. The latter was a freelance merchant, engaging in the long-distance trade under the contracts between he (private merchant) and the private landlords. From the above statements, we can conclude that landlords is commissioner(employee) and civil merchant is a man requested to carry out trade (employee). Then, rightly, landlords took a position superior to merchants.

6.5. Merchant and mayor

City administration in Sippar had been left to the overseer of merchants and the judge³⁶. Here, the overseer, whose tenure was one year, was elected from the members of merchants. Generally, city

administration was commissioned to the mayor elected among wealthy merchants³⁷.

In a Hammurabi law article (H23) the town (âlu) and the town mayor (rabiânu)³⁸ compensate (iriaabbuŠum) the materials robbed by robbery. And also in H24, the town and its mayor pay one mana when the victim in H23 was killed. We can suppose that the mayor in town might be a big merchant.

IV-7 Conclusion

1. The contract document was inscribed on the clay tablet. Evidently, the word; cuneiform tablet, written in the documents, was a synonym of the contract.
2. The wedge-shaped writing (the cuneiform script) was adopted without exception.
3. Ordinary people in the Old Babylonian period could 'read and write' the cuneiform script.
4. The popularization of cram schools had realized comparatively higher level of the literacy of ordinary people.
5. The private contracts constituted a fundamental element of the social activity.
6. The documents were kept in his private house.
7. Various contracts, probably made by an ordinary man during his life-spun in the Old Babylonian period, are demonstrated (Table IV-1).
8. People of all the social ranks, such as awilum, muskenum and even slave have the right of selling and buying of the property. But, there were some exceptions. The lands, farms, and houses, all allocated by king for the soldiers, the policemen, and the tax-collectors, were

- not allowed to sell them to others. (Table IV -2).
9. There were some exceptions against the above-mentioned exceptions.
 10. From 'buying and selling' contract records, 'Primogeniture principal' (H165) seems rather limited (Appendix A).
 11. Large number of the tenant contracts for each family had been preserved in the district, where he lived. These contracts were some time regarded as effectual, in spite of change in dynasties.
 12. Although powerful supporters to the former dynasty were down fell, the contracts of sub-tenants were valid as they were.
 13. The tenant contracts, together with 'buying and selling' contracts, were the quite important documents, which should be kept with great attention at their homes.
 14. Majority of the economic activities was guaranteed by numerous contracts.
 15. If unfillment of the contract occurred (violated contract) such unfillment was regarded economical illegality (3. 4).
 16. One gur barley was a priori determined, to be equivalent with silver 1 siqlu.
 17. The market prices of barley sharply jumped in the case of the shortage of barley supply, caused by bad weather or natural disaster (Appendix B).
 18. In the Hammurabi law code as well as other three precedent laws any word of copper was not discovered as a currency.
 19. Silver had been used over a quite wide range of the eleven categories, covering almost whole social life except agriculture (Table IV -7).

20. Barley had been used only in comparatively limited number of the categories (Table IV-8)
21. Barley had been used as currency only in the agriculture and its related categories and in the Hammurabi age barley was only a substitute currency.
22. The third currency was sesame.
23. In the Eshnunna laws it was approved for debtor to use barley equivalent with when the debtor tried to pay back his debt to the creditor, but had not silver (E19, E20).
24. One mana is 505 gram. 1Še = 47 mg silver.
- 25 Regulations of time are year, month, and day. In the laws no word on 'week' was found.
26. Annual income was exclusively paid on the barley basis (Table IV-9(1))
27. Monthly pay for day-laborer is silver 1 siqlu /month (Table IV-9(2))
28. A typical operation costs one year~ one-and-half years income of a craftsman.
29. Pay of day-laborer was higher in mid-winter ~ later spring term than that in late summer to early winter term (Table IV-9(3))
30. Medical doctor's income is, as expected, prominently high. (Table IV-9(4))
31. In the Hammurabi laws the articles, which are concerned with 'merchant' (tamkarum) are major.
32. Merchant, together with farmers (landlord), became an essential sector in the old Babylonia period.
33. The merchant had the close connections with ordinary people (family), salesman (retailer) and tenant farmer (Chart 1).

34. The relations between agriculture and commerce in the Old Babylonia period were shown in Chart 2.
35. Mesopotamia had a scanty of indispensable natural resources to keep a high living standard. Therefore, these materials had to be imported from elsewhere, even if it was remote from Mesopotamia.
36. In the Old Babylonia period merchants had a kind of financial activities (mainly loans), which can be called as 'proto-banking' : Private finance to ordinary family ; Finance to business ; Long-distance trading. ; Exchange of goods.
37. The specular natural environments in Mesopotamia accelerate the technological advance leading to the processing industry and development of the commerce business by the long-distance trading.
38. Some instances of unfillment of the contract between merchant and farmer were shown (Table IV-12).
39. There is no article in the Hammurabi law code showing any connections between landlord and merchant.
- 40 The merchants in the Old Babylonian period can be classified into merchant officers and other civil merchants.
41. Landlords took a position superior to merchants.
42. Generally, city administration was commissioned to mayor elected among wealthy merchants.

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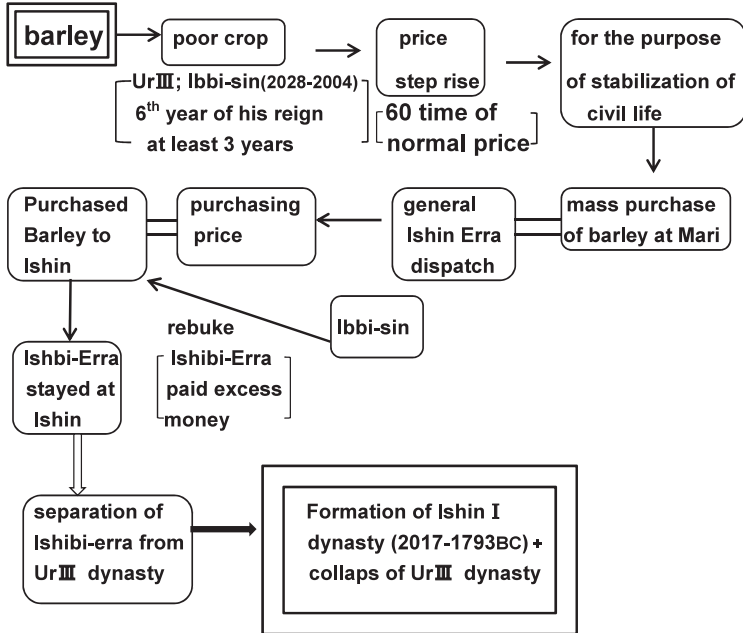
Appendix A Change in possession of rooms at Nippur TA district + inherited by from brothers : constructed from p 208~209 of ref.13

House no.	Room no.	Year				
		1742BC	~	1738BC	~	1732BC
House I	157	1 →	2 →	I.E →	4	4
	173	1 →	2 →	E.N +E.b.I →	E.N	E.N
	178	2	2 →	I.E →	E-N →	I.N
	185	2	2 →	I.E →	E-N →	I.N
	179a	3 →	4 →	I.E →	E-N →	I.N
	179b	3 →	4 →	I.E →	E-N →	I.N
	155	3 →	4	4	4	4
	152a	4	4	4	4	4
House H	180				E.b.I	E.b.I
	180				E.b.I	E.b.I
	180				E.b.I	E.b.I

1; eldest son, 2; second son, 3; third son, 4; fourth son

Example : 1 → 2 ; the eldest son (seller) sold room 157 to the second son(buyer) in 1742 BC. The rest is the same. Rooms of House I had been sold twenty one times during 1742BC~ 1732BC(only ten years spun).

Appendix B An example of a case where soaring of barley price destroyed a dynasty (Ur III)



* Constructed using literature by Maekawa³⁹

Appendix C, Table I -1(ref.1) should read as Table I -1(revised) The periods in the original table were numbered ① ,•••, ⑬ in the order of ages.

Table I -1 (revised) The chronological chart of ancient Mesopotamia

BC	South	North
6800		① Jarmo period
6000		
5600		② Hassuna-Samarra period
5300	③ Eridu period	
5000		
4800		④ Halaf period
	⑤ Hajji Muhammad period	
4300		
4000		⑥ Ubaid period
3500		
	⑦ Uruk period	⑧ Gawra period
3200		
		⑨ Jemdat Nasr period
2900		
2800		⑩ Early Dynastic(ED I)period
2700		ED II period
2500		ED III period
2350		⑪ Agade period (50years)
2112		⑫ Ur III Dynastic period
2004		Ur-Nammu law
2000	⑬ Old Babylonian period (Isin Larsa period + Babylon I period)	Lipit-Ishtar law
		Eshnunna Law
1000		Hammurabi law

Appendix C₂



The locations of the culture centers in the ancient Mesopotamia denoted by black triangle and the numbered order of the times ①, ●, ⑬

(see Table I -1(revised) in Appendix C₁)

Appendix D



Map of the cities referred in the prologue of the Hammurabi law code (⊙) and the other towns, which are not cited (●).

The map was modified from M. van de Mieroop, *ix*