

## **The Code of Hammurabi: An Economic Interpretation**

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### ***Introduction***

Hammurabi was the ruler of Babylon from 1792 B.C. to 1750 B.C.<sup>1</sup>. He is much celebrated for proclaiming a set of laws, called the Code of Hammurabi (The Code henceforward). The Code was written in the Akkadian language and engraved on black diorite, measuring about two-and-a-quarter meters. The tablet is on display in the Louvre, Paris. The stone carving on which the laws are written was found in 1901-1902 by French archeologists at the Edomite capital Susa which is now part of the Kuzhistan province in Iran. The Code was determined to be written circa 1780 B.C. Although there are other codes preceding it<sup>2</sup>, The Code is considered the first important legal code known to historians for its comprehensive coverage of topics and wide-spread application. It has been translated and analyzed by historians, legal and theological scholars (Goodspeed, 1902; Vincent, 1904; Duncan, 1904; Pfeiffer, 1920; Driver and Miles, 1952). The Code is well-known for embodying the principle of *lex talionis* (“eye for an eye”) which is described as a system of retributive justice. However, The Code is also much more complex than just describing offenses and punishments and not all punishments are of the retributive kind. The Code has great relevance to economists. However, very few studies have been undertaken from an economic or economic thought point of view. The objective of this paper is to explore the content of The Code and extract the implied economic principles.

### ***Previous Study***

There are a few studies on the Hammurabi’s Code in the literature with relevance to economic principles. Two such studies are summarized in this section. Fudenberg and Levine (2004) take the second paragraph of The Code and cast it in terms of the theory of learning in game theory. The second law of The Code reads as follows:

If a man has charged a man with sorcery and then has not provided (it against) him, he who is charged with the sorcery shall go to the holy river; he shall leap into the holy river and, if the holy river overwhelms him, his accuser shall take and keep his house; if the holy river proves that man clear (of the offence) and he comes back safe, he who has charged him with sorcery shall be put to death; he who leapt into the holy river shall take and keep the house of his accuser<sup>3</sup>.

Fudenberg and Levine argue that this law is based on a superstition and show that Hammurabi has it “exactly right”, in the sense that this law “uses the greatest amount of superstition consistent with patient rational learning”. In a subsequent paper, these economic theorists (Fudenberg and Levine, 2006), discuss several games inspired by the second law in the Code of Hammurabi. The motivation for their paper is to understand why superstitions persist over long periods of time. They summarize their finding as follows:

...[a] mechanism that uses superstitions two or more steps off the equilibrium path, such as ‘appeal by surviving the river’, is more likely to persist than a superstition where the false beliefs are only one step off the equilibrium path” (p.630).

The second set of authors who examine The Code from a management perspective is Spiegel and Springer. In their paper (Spiegel and Springer, 1997), they draw parallels between the provisions in The Code dealing with medicine and responsibilities of physicians and the modern system of managed care. They argue that The Code establishes a “fee-for-service schedule with a sliding scale based upon ability to pay” (p. 79). They even see the rudiments of a Diagnosis Related Groups (DRGs) as the basis of reimbursement for medical care. According to them, The Code also looks into quality of care with dire punishments for poor outcomes. Their conclusion is that The Code can be seen as a precursor of the current-day managed care system, although they do not claim that The Code was consulted by those who developed the managed care system. These two studies point to the relevance of The Code in understanding human behavior and institutions. However, these authors focused on specific topics. What is needed is a broad analysis of The Code as a whole from an economic thought point of view. Although Vincent (1904) wrote that The Code will “engage the attention of historians, jurists, economists and sociologists” (p. 738), there has been little work done from an economic or a history of economic thought perspective.

This paper is an attempt towards a comprehensive analysis of Babylonian economic thought as expressed in The Code.

### ***Socio-Political Background of the Hammurabi Era***

Hammurabi came to power in 1792 B.C. and ruled for forty-three years (Mieroop, 2005, p. 1). At the time, the ancient Middle East was full of city-states. The Kingdom of Babylon when Hammurabi ascended to the throne was “some 60 by 160 kilometres in size,” having earlier absorbed some neighboring city-states (Mieroop, 2005, p. 3). Hammurabi extended the territory of kingdom by launching several wars of conquest. Once the conquests were over, Hammurabi assumed the role of the “good shepherd” (Mieroop, 2005, p. 82) for his diverse population. After the disruptions of war, he made “the people safe and prosperous again” (Mieroop, 2005, p. 82). He dug irrigation canals, enabling farming to flourish in the conquered lands and making people prosperous. He built defensive fortresses and walls to provide safety to city inhabitants. Each city had its own patron deity and gods had to be taken care of in order to assure the people of prosperity. Babylonia had numerous temples and resident gods who were attended by priests and priestesses. The temples had vast properties for their support and Hammurabi helped with major building and renovation projects (Mieroop, 2005, p. 84).

The king, his people and the gods were all connected through an ideology of good king. Mieroop writes:

The gods chose the king to be the ruler, and in return he took care of their needs and promoted their cults. As a reward, abundance came to the land and the people prospered. The king guaranteed thus that his people were safe and well-fed. The surpluses of the land could then be offered to the gods to satisfy their needs.....Hammurabi was careful to portray himself as the central cog in a system that only worked when all parts fit together. (Mieroop, 2005, p. 84)

Despite the divine connection, Hammurabi was not a theocratic despot. As Chambliss puts it, “A theocratic despot might have tuned his ear to the voice of the gods and ruled by fiat; Hammurabi heard, instead, the voice of the people and ruled by the common law which he founded and codified”. (Chambliss, 1954, p. 22). This approach, however, did not make Hammurabi a democrat. Sovereignty still rested with the king, not the people. Chambliss (1954) puts it this way:

He [Hammurabi] was a servant of the god Marduk but the master, not the slave, of the governed. He chose in the conduct of his office to follow custom and, being a practical man, he undoubtedly chose wisely; but under the Babylonian conceptions of government he might, with equal right, have chosen to disregard custom. (p. 27)

Thus, the political set-up had Hammurabi at the top of the pyramid. Next were the military and temple establishments with their own roles and responsibilities. The final layer consisted of the members of the kingdom. The Babylonian society as recognized in The Code is also seen as hierarchical consisting of three classes (Johns, 1911-1912). The land owners, merchants, priests and government officials and soldiers belonged to the elite group often identified as the *Amelu*. Next in the hierarchy is a group called the *Mushkinu*. This group included artisans, shopkeepers, teachers, farmers and laborers. The members of this group were heterogeneous and free citizens. The lowest ranking group member was *ardu*, the slave.

The slaves were captured in wars or they could be purchased. They could also be born to slaves. As The Code recognizes, the slaves are branded by barbers and it is a serious offense to obliterate slave markings (Law 226). In Hammurabi’s time, slaves had rights which are recognized in The Code and there were safeguards to prevent abuse. Slaves could carry on their own businesses, even own other slaves, marry non-slaves and buy their own freedom. It is not clear from The Code itself what the proportion of these classes were in Hammurabi’s society. However, it is reasonable to assume that slaves were large in number and the economy depended on their labor for its prosperity. There were, however, hired hands who were not slaves to perform various tasks as made clear in Law 257 in The Code.

### ***Issues in Interpretation of the Code***

Before we undertake interpreting The Code from an economic point of view, it must be recognized that the task at hand is not an easy one. As pointed out by Mieroop (2005, p. 99), the purpose of The Code is not clear. As Mieroop puts it, historians are “unclear about why it was created and how it was used in antiquity”. We do know, however, that The Code was intended, as noted by Mieroop, to be heeded by Hammurabi’s own people and future kings (Mieroop, p. 110). Still, without knowing its purpose and use, it has hard to assess its importance and historic significance. We do not know what motivated Hammurabi to proclaim The Code and how concerned he was with economic issues as such. Therefore, our analysis can at best be teasing out the economic implications of The Code rather than asserting that The Code was an economic document. Thus, this paper makes no claim for The Code to be an economic treatise.

Another difficulty arises from the fact that we are dealing with translated text. It is well-known that in many cases meaning is “lost in translation”. It is quite possible that many words rendered in modern English may not reflect the exact meaning in the original language. There is, however, little that can be done to remedy this situation. One has to accept that the scholars who have done the translation carried out their task with utmost concern for accuracy. In dealing with an ancient text, such as The Code, a concern arises in terms of interpreting it in terms of modern concepts. That is, one may be taking an ancient statement and labeling it using a modern concept. It is for this reason that the following analysis suggests only a possible resemblance to modern concepts. There is no assertion to the effect that the author of The Code was conscious of the same modern concept used to interpret the textual passages.

The rest of the paper is divided into following sections: (i) Hammurabi’s vision; (ii) Recognition of economic actors; (iii) Recognition of private property; (iv) Sanctity of contracts; (v) Use of money and banking; (vi) Concepts of efficiency and disapproval of negligent behavior; (vii) Concept of equity; (viii) Economic value of children; (ix) Tree cutting disapproved; (x) Human capital; (xi) Price controls; (xii) Wage and marginal productivity; and (xiii) Some missing elements.

### (i) Hammurabi’s Vision

Hammurabi’s overwhelming vision was that of justice. He declared in the epilogue to The Code that “The great gods have called me, and I am indeed a shepherd who brings peace, whose scepter is just”. Towards the end, addressing his own people, Hammurabi states in the epilogue of The Code as follows:

Let the oppressed man who has a cause go before my statue (called ‘King of Justice’) and then have the inscription on my monument read out and hear my precious words, that my monument may make clear (his) cause to (him), let him see the law which applies to him, (and) let his heart be set at ease, saying: ‘The lord Hammurabi, who is a true father to the people, hath now bowed himself down at the word of Marduk his lord and hath fulfilled the earnest desire of Marduk from north to south, he hath gladdened the heart of Marduk his lord, hath brought prosperity to the people for ever, and he hath also given justice to the land’.

Addressing future rulers, The Code declares in the epilogue as follows:

To the end of time, yea, for evermore, may the king who shall be (raised up) in the land observe the just words which I have inscribed on my monument; may he not alter the judgement of the land which I have judged and the decisions of the land which I have decided nor mar my carved figures.

As part of his vision of justice, prosperity is mentioned. Although the link between the two is not explicitly made in The Code, their frequent juxtaposition makes it clear that Hammurabi was aware that justice and prosperity went together. When Hammurabi makes the claim that he has brought “prosperity to the people for ever”, it is not clear whether he is referring to material or economic prosperity or just general welfare of his people. It is possible that he is referring to either one of them. However, given the attention paid to private property, contracts, wages and prices, it is reasonable to interpret that Hammurabi was concerned about economic issues.

As part of the theme of justice, Hammurabi also states that he will protect the weak from oppression by the strong. These ideas are stated at the very outset in the Prologue. To quote:

.....established for him an everlasting kingdom whose foundations are firmly laid like heaven and earth, at that time Anum and Illil for the *prosperity* of the people called me by name Hammurabi, the reverent God-fearing prince, to make *justice* to appear in the land, to destroy the evil and the wicked that *the strong might not oppress the weak*, to rise indeed like Shamash over the dark-haired folk to give light to the land. (emphasis added)

This theme is again emphasized in the epilogue as follows:

That the strong may not oppress the weak (and) so to give justice to the orphan (and) the widow, I have inscribed my precious words on my monument and established (them) before my statue (called) ‘King of Justice’ in Babylon.....

Thus, by keeping prosperity, in addition to justice, at the forefront, Hammurabi aimed to provide the institutional environment conducive to economic activity. The Code recognized the concept of private property (including the ownership of slaves). Law 6 is where property is mentioned for the first time in The Code and it deals with stolen property. Law 7 refers to slave or a slave-girl as items of ownership along with silver, gold, ox, sheep and ass. The Code recognizes that the master has power over slaves. In order to prevent abuse of power, The Code made provisions for protecting the slaves as well as other vulnerable persons. Thus, there is a strong sense of economic justice in these laws, even though slavery is accepted.

**(ii) Recognition of Economic Actors**

*Laws relevant to this section: 7, 8, 40, 100, 101, 120, 122, 123, 124*

The Code recognizes many economic actors. The predominant activity in Hammurabi's realm was agriculture. The Code points to a feudal system of ownership with tenure resting in the hands of priests attached to a temple, nobles, military and bureaucratic officials. An important figure in The Code is the merchant (Anonymous, 1938). Although it is hard to derive enough information to make a full portrayal of this person, it is clear that the merchant engaged in international trade and even acted as a diplomat abroad. For the most part, not all merchants seemed to be fond of travelling for trading purposes. The Code refers to merchants working through an agent in international trade rather than by themselves. The merchants performed some functions of banker in the Babylonian economy. One aspect of banking is taking deposits and acting as trustee of these deposits (Price, 1927). The Code refers to the practice of grain storage in another's person's house for safe-keeping and stipulates the terms of the contract in strict terms. This activity resembles the safety deposit box provided by modern bankers. Law 120 states as follows:

If a man has stored his corn for storage in a bin in a man's house and a loss occurs in the granary, whether the owner of the house has opened the bin and taken the corn, or whether he wholly contests (the storage of) the grain which has been stored in his house, the owner of the corn shall formally declare his corn before a god and the owner of the house must double the corn which has disappeared and give (it) to the owner of the corn.

For precious commodities to be left in deposit, such as gold and silver, The Code stipulates that a contract must be drawn up in the presence of witnesses. Law 122 states as follows:

If a man wishes to give silver (or) gold or anything whatsoever to a man for safe custody, he shall show anything whatsoever that he gives to witnesses, he shall draw up a contract and (thus) give (them) for safe custody.

Law 123 makes it clear that without a contract or witness, there is no legitimate claim.

Another aspect of banking is lending. The Code points to the role of the merchant as a money lender. The merchant is seen as lending money to farmers to finance agricultural operations. Law 49 states as follows:

If a man has taken money from a merchant and has given a field prepared for corn or sesame to the merchant and has stated to him: 'Cultivate the field, and heap up take and keep the corn or sesame which may be raised', if a cultivator raises corn or sesame on that field, at the harvest it is the owner of the field who shall take the corn or the sesame which may be raised on the field and shall give corn for his money, which he has received from the merchant, and the interest on it and the costs of the cultivation to the merchant.

Law 50 continues as follows:

If he has let a cultivated field (of corn) or a field of sesame, it is the owner of the field who shall take the corn or the sesame which may be raised on the field and shall repay the money and the interest thereon to the merchant.

If the cultivator did not have money, according to Law 51, he could pay in kind according to the royal tariff. Thus, the King becomes the enforcer of the law for this and other circumstances.

**(iii) Recognition of Private Property**

*Laws relevant to this section: 6-25.*

The Code unequivocally acknowledges private property in the form of land and goods. It is clear that the Babylonian economy with its merchants, agents and landowner-cultivators could not function without private property rights and enforcement of these rights. Violation of property rights brought strong penalties, including capital punishment.

Law 6 states as follows:

If a man has stolen property belonging to a god or a palace, that man shall be put to death, and he who has received the stolen property from his hand shall be put to death.

The law does not make a distinction between an innocent and knowing receiver of stolen property. The capital punishment is meted out to the thief as well as receivers of stolen property.

The Code recognized slaves as property and the property rights of the slave owners were strictly enforced. Law 15 states as follows:

If a man has let a slave of a palace or a slave-girl of a palace or the slave of a villein or the slave-girl of a villein escape by the great gate, he shall be put to death.

Harboring a runaway slave also was a capital crime. Law 16 states as follows:

If a man has harboured a lost slave or a slave-girl of a palace or of a villein in his house and then has not brought (them) out at the proclamation of the herald, that owner of the house shall be put to death.

Attempted robbery was a capital crime. Law 21 states as follows:

If a man has broken into a house, they shall put him to death and hang him before the breach which he has made.

Firemen attempting to steal the property of the victim of the fire were also dealt capital punishment. Law 25 states as follows:

If a fire has broken out in a man's house and man who has gone to extinguish (it) has coveted an article of the owner of the house and takes the article of the owner of the house, that man shall be cast into that fire.

It is thus clear that The Code took violations of property rights very seriously and meted out capital punishment in most cases.

#### **(iv) Sanctity of Contracts**

*Laws relevant to this section: 36-39, 42-45, 49-65, 113, 120, 122, 194, 253-257. Laws 66-99 are missing due to erasure by Elamite king Shutruk-Nahhunte in the 12<sup>th</sup> century B.C. (Microop, 2005, p. 99). Some of them have been restored.*

The Code and numerous clay tablets from the Hammurabi era show that no transaction was considered valid without a written contract. Once the contract was in place, all parties to the contract were duty-bound to follow its terms. Violations were punished. Law 36 states that the field, garden and house of a chieftain, a man or one subject to rent payment cannot be sold. These are like feudal estates and are conferred by the king in return for royal service and as such were inalienable in the sense they cannot be sold (Johns, 1911-1912). If someone buys these properties, that person will lose his financial investment. Law 37 states as follows:

If a man buys the field the plantation or the house of a runner a fisher or a rent-payer, his tablet shall be broken and he forfeits his money; field plantation or house shall revert to its owner.

The relationship between land owner and tenant is governed by strict contractual terms. If someone agrees to make waste land into farming land, he must deliver. Otherwise, fines would follow. Law 44 states as follows:

If a man has taken up a waste field for three years for opening up and has been slack and does not open up the field, in the fourth year he shall plough the field, hoe (and) harrow (it), and he shall restore (it) to the owner of the field; he shall pay 10 *GUR* of corn for every *BUR* (of land).

Violation of trust in the delivery of a consigned property received punitive fines. Law 112 state as follows:

If a man is engaged on a trading journey and has delivered silver (or) gold or (precious) stone(s) or any chattels in his possession to a man and has consigned them (to him) for consignment (to their destination), (if) that man has not delivered whatever was consigned (to him) where it was to be consigned but takes and keeps (it), the owner of the consignment shall convict that man of not having delivered what was consigned (to him) and that man shall give 5-fold anything that was delivered to him to the owner of the consignment.

Cheating was not tolerated. Law 113 states as follows:

If a man has (a claim to) corn or silver against a man and then takes corn without (the knowledge of) the owner of the corn from a bin or from a warehouse, they shall convict that man of taking the corn without (the knowledge of) the owner of the corn from the bin or from the warehouse, and he shall render so much corn as he has taken and forfeits anything whatsoever that he has lent.

This law indicates that private property was inviolable even as a claim. Another example of sanction against cheating is the case of a wet nurse. Law 194 states as follows:

If a man has given his son to a nurse to be suckled and that son has then died in the charge of the nurse, (if) the nurse then binds another child (to her breast) without (the knowledge of) its father or its mother, they shall convict her, and, because she has bound another child (to her breast) without (the knowledge of) its father or its mother, they shall cut off her breast(s).

If one agrees to cultivate the field for another, he must deliver the crop as promised. Otherwise, harsh punishment would follow. Law 253 states as follows:

If a man has hired a man to look after his field and has entrusted him with meal (and) given cattle into his charge and has engaged him by contract [to] cultivate his field, if that man has stolen seed or fodder and it is seized in his hand(s), they shall cut off his fore-hand.

These examples show that The Code took the sanctity of contract for granted. Any violation was met with punishment in the form either of compensation for losses suffered or harsh retribution.

#### **(v) Use of Money and Banking**

*Laws relevant to this section: 17, 24, 88, 90, 100, 101-103.*

The Code refers to the role played by merchants in advancing capital to the land-owners and to merchants. It also refers, as we have seen earlier, to land-owners advancing land, seeds, labor and equipment to cultivators with a contract to share the crop. These are forms of the banking function.

There is some internal evidence in The Code about the rate of interest charged for loans. Law 88 states as follows:

If a merchant has given corn on loan, he may take 100 *SILA* of corn as interest on 1 *GUR*; if he has given silver on loan, he may take 1/6 shekel 6 grains as interest on 1 shekel of silver.

This has been interpreted as fixing the interest rate at 20 per cent (Gordon, 1957, p. 8). The next law punishes the merchant who charges more than 20 percent<sup>4</sup>. The punishment is that he forfeits the principal amount.

Although Babylon had flourishing trading activity, Hammurabi did not come up with token money in the form of coins with a royal stamp as emerged in Lydia, Asia Minor and Greece around 650 B.C. (Mundell, 2002). However, money was in use in the form of commodity money. For example, a shekel is expressed in terms of weight. Fines and compensations in The Code are expressed in terms of weight in silver.

#### **(vi) Concepts of Efficiency and Disapproval of Negligent Behavior**

*Laws relevant to this section: 53-56.*

The Code shows clear indication of distaste towards any form of inefficiency. As we discussed earlier about the sanctity of contracts, The Code looks unfavorably on the non-fulfillment of contractual terms, thereby promoting efficiency.

The Code looks down upon damages caused by negligent behavior. Law 53 states as follows:

If a man has been slack in maintaining [the bank of] his [field] and has not maintained [his] bank and then a breach has occurred in his [bank] and so he has let the waters carry away (the soil on) the water-land, the man in whose bank the breach has occurred shall replace the corn which he has (caused to be) lost.

Similarly, Law 55 states as follows:

If a man has opened his trench for irrigation (and) has been slack and so has let the waters carry away (the soil on) his neighbor's field, he shall pay corn corresponding to (the amount of the crop which) his neighbor (has raised).

One can recognize in these laws not only the concept of efficiency, but also a rudimentary understanding of the concept of tort. If one's action caused harm to another, the victim has the right for compensation. The Code specifies the rate of compensation for the harmful actions.

#### **(vii) Concept of Equity**

*Law relevant to this section: Preface, 108, 111, 168-172.*

The Code pays attention to equity. It emphasizes fairness in pricing. Law 108 is an example of the principle of equity. It states as follows:

If an ale-wife does not accept grain for the price of liquor (but) accepts silver by the heavy weight or (if) she reduces the value of beer (given) against the value of corn (received), they shall convict that ale-wife and cast her into the water.

The Code recognizes that farmers were going to be short on cash between planting and harvesting but enjoy considerable leisure time which could be spent at the tavern. Farmers who drank on credit between plowing and harvest had the assurance of a controlled price. Law 11, therefore, states as follows:

If an ale-wife has given 60 *SILA* of coarse liquor on credit, at the harvest she shall take 50 *SILA* of corn.

The Code also makes sure, as it states in the Preface, that the strong do not exploit the weak. This is apparent in its setting of obligations of compensation to those who suffer a loss and to children who lose their fathers and to widows.

The Code specifies that a father cannot disinherit his son in a cavalier fashion. Law 168 states as follows:

If a man sets his face to disinherit his son (and) states to the judges 'I will disinherit my son', the judges shall determine the facts of his case and, if he has not deserved the heavy penalty of disinheritance, the father may not disinherit his son.

Even if the son deserves to be disinherited, Law 169 suggests pardon for the first time and allows disinheritance only in the second round.

Upon the death of her husband, the widow is entitled to her dowry and whatever settlement her husband made for her. Law 171 contains the following passage:

The first wife shall take her dowry and the settlement which her husband made her and assigned in writing to her on a tablet and may dwell in the dwelling-place of her husband; so long as she lives she shall have the usufruct (of his property). She shall not sell (it). Her estate belongs to her sons.

Law 172 goes further to protect the widow from the schemes of her sons. It contains the following passage:

If her husband has not made her a settlement, they shall make good her dowry to her and she shall take a share like (that of) one heir from the property of her husband's house. If her sons persist in persecuting her to make her go out of the house, the judges shall determine the facts of her case and lay a penalty on the sons; that woman shall not go out of her husband's house.

Law 172 states that if the woman decides to leave her deceased husband's house, she must surrender the settlement to her sons, but is still entitled to her dowry which she brought into the marriage from her father's house.

With these laws of inheritance, Hammurabi made sure that children who lost their fathers and widows were protected. What is notable is that Hammurabi used inheritance laws and not welfare state measures to achieve his objective of protecting the weak.

### **(viii) Economic Value of Children**

*Laws relevant to this section: 144-147*

The Code assumes that the purpose of marriage is to bear children. This is clear when The Code allows a man to marry another woman if his wife did not bear any children. It was also common for a barren woman to get a slave-girl for her husband to bear children. Law 145 states as follows:

If the man has married a priestess and she has not provided him with sons and so he sets his face to marry a lay-sister, that man may marry a lay-sister (and) take her into his house; that lay-sister shall not then make herself equal to the priestess.

Thus, the senior wife still maintains her rank in the household. Law 146 deals with the case of a slave-girl provided by the barren wife to her husband for bearing sons. Again, the rank of the senior wife is upheld. It states as follows:

If a man has married a priestess and she has given a slave-girl to her husband and she bears sons, (if) thereafter that slave-girl goes about making herself equal to her mistress, because she has borne sons her mistress shall not sell her; she may put the mark (of slave) on her and may count her with the slave-girls.

Law 147 makes it clear that the function of the slave-girl is to bear sons. It states as follows:

If she has not borne sons, her mistress may sell her.

Since the Babylonian economy was predominantly agricultural, children must have had an economic value (Vincent, 1904, p. 754). For the upper class property owners, sons may not have been desired for their labor, but as help in managing the estate and later as heirs to the estate.

### **(ix) Tree Cutting Disapproved**

*Law relevant to this section: 59.*

Law 59 states that anyone who cuts a tree in a garden without the knowledge of the owner shall pay a fine of half a *maneh* of silver. This law can be interpreted as requiring compensation for damage. However, the law does not stipulate that the tree has to be a fruit-bearing one to elicit compensation. By simply stating that if a tree is cut a fine is in order, The Code suggests that trees were protected. Could it be that there is some ecological awareness of the importance of trees?

### **(x) Human Capital**

*Laws relevant to this section: 188, 189*

The Code exhibits an understanding of human capital in the context of an apprenticeship. In the laws dealing with adoption, Law 188 states as follows:

If a craftsman has taken a son for bringing up (in his craft) and teaches him his craft, he shall not be (re)claimed.

To indicate that the issue is the training involved, the next law states that if the craft is not taught then the adopted son could return to his original parent's house. Together, these laws establish the principle that the original parents cannot appropriate the human capital conferred on an adopted child by a craftsman.

### **(xi) Price Controls**

*Laws relevant to this section: 215-217, 221-224, 228, 234, 235, 239, 241-243, 257, 258, 261, 268-277.*

Assuming that The Code is a reflection of the Babylonian economy, one gets the impression that the Babylonian economy under Hammurabi was a strictly controlled one. Various prices are prescribed. Law 215 fixes the fee for surgeons. It states as follows:

If a surgeon has made a deep incision in (the body of) a (free) man with a lancet (?) of bronze and saves the man's life or has opened the caruncle(?) in (the eye of) a man with a lancet(?) of bronze and saves his eye, he shall take 10 shekels of silver.

The fee, however, depends on the rank of the patient in the social hierarchy. For a free man, the fee is five shekels. For a slave, the owner of the slave is to pay two shekels. Thus, the lower the rank, the lower the fee received by the physician for the same service. This payment schedule is referred to by Spiegel and Springer (1997) as a sliding scale based upon ability to pay. This scheme, however, does not seem to provide incentive to be careful when handling low-ranked patients. However, The Code metes out harsh punishment for medical malpractice. Law 218 states as follows:

If the surgeon has made a deep incision in (the body of) a (free) man with a lancet (?) of bronze and causes the man's death or has opened the caruncle (?) in (the eye of) a man and so destroys the man's eye, they shall cut off his fore-arm.

Thus, a surgeon who is found guilty of malpractice can no longer practice his profession. The penalty, however, is less severe if the patient is a slave. It is a difference in kind, not restitution, but compensation. If the slave dies in the hands of the surgeon, the surgeon must replace the slave. If the surgeon destroys the eye of a slave, the surgeon must pay half the price of the slave in silver. The other professions for whom prices are fixed are: veterinarian, builder, shipbuilder, sailor, farm animal renter, farm laborers, animal herders, farm equipment renters and transport vehicles renters.

Given that The Code is literally etched in stone, it could be taken as fixed prices for all times. The Epilogue lists curses for the later rulers if they do not follow the edicts etched in The Code. These curses reinforce the edict's permanent nature. Thus, there is no room for inflation in Hammurabi's Babylonian economy. From The Code, it is not clear whether the economy had a comprehensive price control or whether only those mentioned in The Code were fixed and other prices were free. Nevertheless, Hammurabi's intent appears to be to establish a system of fair prices and wages within an economy driven by private property rights. As Vincent (1904) aptly puts it:

One sees an energetic and capable people pushing their industry to a complexity which demanded precise regulation, and displaying all those unsocial tendencies which, fostered by private property and competition, require check and guidance from the state. (p. 746)

### **(xii) Wage and Marginal Productivity**

*Laws relevant to his section: 257-261, 268-277.*

Wages and rates fixed by The Code are not arbitrary, but are reflective of the productivity level of the underlying resources. For example, a ferry boat with a sizeable number of passengers carries a charge of three *GERAHS* in money per day and freight boat two and a half *GERAHS* per day. A ship of only sixty *GUR* receives one-sixth of a shekel in money per day (Laws 275-277). If one hires an ass for threshing, the rate is twenty *ka* of corn and for a young animal it is ten *ka* of corn. This reflects the fact, as spelt out by Hammurabi, that the productivity of a young animal is lower and hence it also commands a lower fee (269, 270). If one hires an entire team consisting of an ox, cart and driver, the rate is eighty *ka* of corn per day (271). A cart alone will cost forty *ka* of corn per day (272). This suggests that the marginal productivity of an ox and driver would be worth forty *ka*. Another example of wages reflecting work effort is that of a day laborer. During the summer months when the days are long and work quite hard, The Code stipulates a payment of six *GERAHS* of money per day. For the rest of the six months, the laborer must be paid five *GERAHS* per day. Thus, wages and rates that are fixed by The Code reflect the differing productivity of different jobs. When we consider the difference in rates between the team of ox, cart and driver vis-a-vis the cart alone, one can discern the roots of the marginal productivity theory.

**(xiii) Some Missing Elements**

While The Code has dealt with so many concepts that are connected to the economy, there are some glaring omissions. One of them is the complete disregard for the law of supply and demand. The wage and price controls, as we have seen, are quite elaborate. By etching these wages and prices in stone, Hammurabi gave them a permanent status. Any one who dared not to follow the provisions of The Code were cursed as depicted in the Epilogue. As Chambliss (1954) puts it, “[A]pparently a drought was not supposed to affect the value of grain – nor a large influx of captives of war, the price of slaves” (p. 29). Thus, Hammurabi’s price theory resembled the medieval scholastic tradition of Thomas Aquinas (1981) with its emphasis on just price rather than that of Adam Smith (Smith, 1937) with an emphasis on market mechanism as the determinant of price. This is consistent with Hammurabi proclaiming himself as the king of justice.

The other glaring omission is the citizens’ “fiscal obligations to the state” (Mieroop, 2005, p. 107). There is no mention in The Code of how the state raised revenues or how they were allocated. The Code with its elaborate laws and punishments represents an intrusive state which probably required considerable revenue to uphold justice. The Code itself is unhelpful in resolving this mystery.

**Conclusion**

The Code of Hammurabi is not an economic document, nor is it a theoretical treatise. What it did was to set down comprehensive laws for the Babylonian society. The social structure was pyramidal, with the king at the apex and the three classes below with numerous laboring classes at the bottom. However, the king did not own any land. The land was owned by the temples or by individuals. Also, the king does not appear to have been an autocrat controlling every aspect of society. Given the picture of an economy driven by private property that emerges from reading The Code, there was considerable economic freedom in Babylonia. The economic role of the state was recognition and enforcement of property rights. The Code also established the principle that the strong cannot exploit the weak, bringing a measure of economic justice.

The Code of Hammurabi contains many of the ingredients of modern capitalism: private property, use of commodity money and credit and government by a set of enforceable laws. Thus, The Code can be seen as an exercise in institution-building. In our own times, Acemoglu, Johnson and Robinson (2005) have emphasized the role of institutions in promoting long run growth. The Code, however, is silent on public finance and did not recognize the law of demand and supply. We have shown in this paper that The Code contains other important economic principles of efficiency, equity and productivity, albeit in an implicit form. For these contributions, The Code must be recognized as an important document in the history of ancient economic thought.

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**Endnotes**

1. The exact dates of Hammurabi’s rule are uncertain. Henige (2006, Ch. 13) discusses the various suggested dates. I am using the dates suggested by Mieroop (2005) in a recent biography.
2. Chambliss (1954, p. 20) mentions Lipit-Ishtar Code and the Laws of Eshnunna as antedating the Code of Hammurabi.
3. All the texts from The Code are from Driver and Miles (1955), Vol. 2.
4. Johns (1911-1912) speculates that during the Hammurabi era the interest rate was in the range of 20 to 30 percent.

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