From Circulation to Mining --- The Transition of monetary system in East Asia based on Korean Sources (918-1550) ¹

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Abstract

Monetary history in Korea needs to be depicted on a long calendar with global perspective. This paper investigates into the international trade and precious metal flows of East Asia during the 10th-15th centuries based on Korean sources. The monetary history from the Chinese side clearly told us “Chinese puzzle” about the transition from bronze coin: Khitan/Liao (916-1115), Jurchen/Jin (1115-1225) and Song (960-1279), to paper money: Yuan (1279-1368) and Ming (1368-1644). There was no coined silver in Chinese monetary history, but this is quite different from the Korean side. Basically, a bimetallic currency system was kept as long as the precious metal currencies in Korea and the transition was from silver vase-shaped coinage (銀甁) with bronze coin in the Koryŏ (918-1392) to copper coin with silver ingots in the Chosŏn (1392-1910).

Keywords: silver vase-shaped coinage (銀甁), bronze coin, paper money, proto-globalization

Introduction

In 1933 an artifact appeared in the Reports of the Librarian of Congress of the U.S.A connected with the name of Marco Polo (1254-1324) mentioning the Koryŏ (918-1392) dynasty, which turned out to be the maps from the home archives of the descendants of a friend of Marco Polo. I found this fact in the paper written by Leo Bagrow Stockholm in 1948 ² which have the Chinese sentence “王四邦 贒有 [一] 百万(萬)人 未知之地” on the margin of the map, and he recorded “isola de la feminine(Island of Female)”.

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³ I attempt a translation: “Among the King’s four quarter territories, even though there are one million (mounted bandits) pirates, there is a land that has never been known by them.” Professor K.B.J Karlgren, a Swedish sinologist, also attempted to decipher this Chinese sentence. He succeeded in reading only a few words “---have 1,000,000 men ---to be King over the states of the four quarters---“but it is too difficult to precisely decipher it because the Chinese ideographs were corrupted by the copyist, who was obviously not familiar with Chinese ideographs. It is not clear why Marco polo depicted “ Island of Female”, I guess King Ch’ungnyŏl(1275-1298) was given a daughter of Kublai Khan as his queen, and thereafter a succession of Koryŏ kings had princesses of the Yuan imperial house as their primary consorts, while sons born to these queens would normally succeed to the throne. Thus Mongol became a “daughter-in-law nation” to Koryŏ.
There are several things that I believe are important for the global perspective of Korean economic history. The first is as regards the spaces of Tartar and Kuril on the map, approximately covering today’s North Korean territory. The Koryŏ mentioned by Marco Polo had traded furs, skins, horses, silver and gold with Khitan’s(遼 916-1125) which used iron coins at least according to the historical records from Korea.

The second is at the end of the text the Arabic date 1287 marked a watershed in the loss of sovereignty of the vase-shaped silver currency(銀甁) in Korean monetary history when Kublai Khan promulgated the paper money Zhiyuan chao (至元寶鈔), Zhongtong chao (中統寶鈔), forced them as Koryŏ’s legal money (two guan= one liang silver). The third is the numeral code recorded on the map as the copyist recorded it. It is the Suzhou (蘇州) numeral system used by the merchants of Kaesŏng city from the 11th century, just north of the 38th parallel in Korea. These merchants have been famous for their commercial acumen and their bookkeeping methods, which seem to have changed little over time.

The great puzzle for the monetary history of East Asia is why Chinese empires, the Song (960-1270), Yuan (1260-1368), Ming (1368-1644), and the Qing (1644-1911), never adopted the silver coinage system, even though they were well aware of the value of overseas trade and the silver circulating all around the world. This puzzle, when amplified, is also called “the black hole three centuries transition”, meaning “the meaningless transition” between the Song, Yuan, Ming, and Qing linked neither to the dynamic of the preceding Song transformation nor to the subsequent developments of the Ming dynasty.

However, the Koryŏ (918-1392) and the Jurchen Jin (金:1115-1224) were able to create a silver currency system in 12th century, for Korea first issued year is 1101, for Jurchen Jin is 1197. During the mid Koryŏ AD 996-1271 dynasties, Korea’s diplomatic and commercial relation with continental people and its trade contracts with the oversea world all expanded dramatically, highest levels that far surpassed anything known in Korean history. What happened to the 11th-13th centuries in regards to the monetary system? What is the relationship between the rise of the steppe and the decline of the maritime economy had a direct influence on the development of the Chinese state, by putting geopolitical imperatives and questions of peace and war at the forefront of any policy agenda?

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4 Marco Polo mentioned Korea as Cauly and Kauli. In Korea Cauly(Kauli:구리) probably pronounced something like “Kuri”, transcribed with various Chinese characters:句麗,勾麗, or 駒麗 (구려, Kuryŏ), 高麗 (고려, Koryŏ), 高駒麗 (고리, Kori), or 俊麗 (구리, Kuryŏ). In 高駒麗, the character 高 ("high") is an adjective, rather than a part of the transliteration. The characters 俊麗 or高麗 are sometimes read as meaning Guru(구루, walled city) or Gauri(가우리, center), Keith Pratt and Richard Rutt, Korea: A Historical and Cultural Dictionary(Surrey England:Curzon Press), p.232 but I would like to rethink here the meaning into copper (bronze), because句麗高麗 originate from area of Bronze culture.

5 Although the year in Arabic on the map can be read as 1277 or 1267, in 1267 Marco Polo was only 15 and was still at home in Venice. In 1277 he was already an official of the Chinese court, but it is not likely that by that time he was entrusted with important missions. That’s why Leo Bagrow Stockholm estimated the date is 1287. P.12-13


8 PAUL JAKOV SMITH, EURASIAN TRANSFORMATIONS OF THE TENTH TO THIRTEENTH
If we find a clue for this puzzle, it might be a help for another puzzle of the history of globalization from the mid-16th century, which is why the East Asian markets disintegrated into the rise of Western European capitalism up until the mid-20th century, with the notable exception of Japan. Why did the monetization of late Chosŏn Korea (1634-1910) and Qing China (1644-1911) fail to produce a capitalistic monetary system integrated with Western capitalism, despite the existing highly developed market economy in rural areas and the great transformation of the monetization of silver which flowed into Korea and China from Japan and the New World⁹.

Jane Kate Leonard summarizes the reason for the disintegration between East and West very well. She points out that the domestic economies of East Asia seem to have muted the dichotomy of global market fluctuations in the price of silver compared to their impact on the urban commercialized economies of Europe¹⁰.

Wang Gung Wu also hinted at the reason of disintegration between the East and the West. He argues that the Ming (1368-1644) dynasty paradoxically rejected the relatively liberal Mongol policies and re-imposed a stronger and more institutionalized form of the tributary system, even while marking the high point of Chinese naval history with Zeng He’s great voyages¹¹. Simultaneously, after Pax Mongolica and before Pax Britannica, the Afro-Eurasian Mediterranean was divided between the Islamic and Christian kingdoms. The new maritime peoples of Portugal and Spain had to turn to the West and the south Atlantic for opportunities to seek their fortunes, but eventually they reached East Asia with the silver of the New World, their trade partners already having changed to smuggling and pirate groups¹².

This paper addresses the Korean transition model from the silver economy for a large business to the bronze coin economy for a small trade based on assorted figures concerning the circulation for foreign trade (11th-13th centuries), bullion famines with mining periods (14th-15th centuries), which are basically supported by a reasonable amount of non-quantitative evidence originating from the official chronicle of the Koryŏ and Chosŏn dynasties.

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⁹ Richard Von Glahn mentioned that the economic changes of post 16th century China recast from “sprouts of capitalism” to a market-driven model of development. See Fountain of Fortune money and monetary policy in China, 1000-1700, University of California Press. 1996. p.2. I also produced the same model for Korea. See “Korean Expansion and Decline from the Seventeenth to the Nineteenth Century: A view Suggested by Adam Smith” (with James B. Lewis), Journal of Economic History, March/2008 Vol 68 No 1 (pp. 244-282).


¹² Wang Gungwu, p.22.
The first phase: Medieval circulation in Yellow sea led by the 
Koryŏ dynasty(993-1287)

In the 1980s, Eric Jones asked why Song China had developed well ahead of other societies in Eurasian continent, but the Song achievement was never repeated in China\(^\text{13}\). For the finding of a clue of the Song’s puzzle, we need to review the factual opinions of Su Tung p’o (蘇東坡:1037-1101), Wang Anshi (王安石:1021-1086), and Fu Pi (富弼:1004-1083)\(^\text{14}\) during the transitional times from Northern Song to Southern Song. Wang’s famous “New law (新法)” issued a financial reform paying cash for service tax instead of compulsory labor, which increased the demand for small currencies, but the merchant groups demanded a monetary policy for stable foreign exchange and state-issued standard coins as the primary medium of overseas trade. Wang’s reform paid attention to the small currency for domestic market which was related to the jealously guarded incentive system centered on private landholding rights\(^\text{15}\).

The limitations of Wang’s monetary policy led to a worsening of the monetary woes of the Song’s court after the Jurchen invasion of the 1120s\(^\text{16}\). The Song’s failure to establish an international monetary system in East Asia was highly related to their denying overseas trade with Koryŏ under the guise of upholding the tribute system. Only Fu Pi (富弼) fully recognized the value of Koryŏ’s potential role in an offensive against the Khitan. He had evidence of this, which was a disastrous defeat which Koryŏ inflicted on the Khitan in 1018 as reported: “never since then have the Khitan dared to use arms against the Koreans\(^\text{17}\).”

Koryŏ\(^\text{18}\) court managed to lie in the sphere of national sovereignty establishing a monetary system was highly linked with diplomatic relationships and military power in East Asia. Koryŏ always kept with three strategies; profitable transit trade connecting the Song dynasty with the Jurchen(女眞), peaceful diplomatic negotiation and powerful military protection against Khitan(契丹). These three factors ensured peace and prosperity until the Mongol’s invasion in the late 13\(^\text{th}\) century. In 1287, Mongol policy banned the circulation of precious metals and caused serious damage to the equilibrium

\(^{13}\) About the relation between Chinese Puzzle and Jones Question, See Kent G. Deng Development and Its Deadlock in Imperial China, 221 B.C.-1840 A.D. Economic Development and Cultural Change Vol. 51, No. 2 (Jan., 2003), pp. 479-522
\(^{14}\) Fu Pi (富弼) Middle period of the Northern Song Prime Ministers
\(^{16}\) Richard von Glahn, 1996 p.50
\(^{18}\) Until now most of accounting historians are confronted with insurmountable gap or complete silence during the transitional period from medieval capitalism to modern capitalism. Therefore it is natural why they fail to find the empirical evidences shown the articulated Double Entry Book-keeping(DEB) system from journal entry to financial statement’s entry, but if we consider the great networking and similarity of Medieval capitalism between East Asia and Europe for creating DEB which is the same remark of Genoa, Florence and Venice in the Mediterranean Sea applied to Kaesŏng(開城) and Zaitun(泉州) in the Yellow sea. We can adopt the 7 antecedentsof DEB by the A.C. Littleton to East Asian Medieval capitalism and show the commercial communication from eleventh century to thirteenth in Yellow sea.
the common monetary system for international trade and a diplomatically neutral position concerning military power had kept through three centuries.

King GwangJong(949-975) renamed the capital city KaeSŏng into “The Imperial Capital KaeSŏng (皇都開城)” congregated international trade and cultural power as an expression of equality with Empire. King SŏngJong (成宗:982-998) founded the National Academic Institute for the study of the Confucian bibles and historic classics, which advanced the ability of diplomatic negotiation. This institute gathered the sons of local influential families, who then became human capital for national benefit instead of local prestige.

The important trading items with Song were Neo-Confucian books and Buddhist scriptures which mean that the cultural networks with Song promoted diplomatic bargaining against the northern regions, while the Jurchen supplied the horses necessary for military protection. The military or diplomatic heroes had passed the civil service examinations, even if their families were related to the King on the King’s mother’s side, they still had to pass this fair competitive process. Well educated human capital groups made Koryŏ’s currency system always kept a harmony between the Song in the south and the Jurchen in the north.

The record and collection for the numismatic evidence do completely correspond from time 996 emerged in the circulation of precious metals on the Korean peninsula simultaneously with the circulation of iron coin. It is said that King SŏngJong (成宗:982-998) started to mint iron coin and copper coin. His reign established intermediate trade with the Song and the Jurchen, but Khitan wanted to build new diplomatic relations with Koryŏ. However, Khitan launched their military army against the Jurchen and Song, so Koryŏ hostile towards Khitan, because Khitan conquered Bohai (渤海) in 926.

Koryŏ regarded Bohai as ancestral land, and, as it had belonged to Koguryŏ (高句麗), wanted to keep their heritage of the northeastern land, so although Khitan tried to established diplomatic relationship with Koryŏ, Koryŏ rejected Khitan’s request every time. For example, when Khitan tributed 50 camels in October 942, Koryŏ’s first King ordered the Khitan envoys banished onto a western island, while the

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19 Koryŏ-sa 960 04
20 The forming of elite groups in Koryŏ’s society was fundamentally different from that of the Silla dynasty (新羅:57 BC-661 AD), which preceded the Koryŏ dynasty on the Korean peninsula. Silla was basically an oligarchic noble society which was dominated by two royal classes, “sacred bone” (seonggol, 聖骨) and "true bone" (jingol, 真骨). The membership of elite was dictated by the bone rank system, which was strictly lineage-based, and dictated clothing, house size and the permitted range of marriage. This privileged group disappeared during the upheavals at the end of unified Silla (668-927), eventually being replaced by Koryŏ’s new elite, which was recruited from the civil service examinations starting from 958. The new elite group created by the anonymous competitive examinations based on literary ability and knowledge of the Confucian classics fostered a high international commercialization of culture together with Song. See E.A.Kracke, ‘Family versus Merit in Chinese Civil Service Examinations under the Empire,” Harvard Journal of Asiatic Studies 10(1947):105-23
21 Koryŏ-sa 991 04
22 Koryŏ-sa 996 04
23 Balhae (698-926) (Bohai in Chinese) was a Korean empire established by Dae Jo-young, a former Koguryeo general after the fall. It was a successor state to Koguryeo. Koryŏ want unification Korean peninsula including Balhae,
camels were tied beneath Manbu bridge (萬夫橋) located in the capital city center of Kaesŏng. People were able to observe the camels starve to death.24

When Khitan first invaded Koryŏ in August of 993, the court debated between fighting against the Khitan and negotiating with them. Koryŏ’s court then decided on diplomatic negotiation with preparation for war, and sent Seo-Hui (徐熙:942-998), whose diplomatic success led to the withdrawal of 800,000 Khitan soldiers. He knew what Khitan really wanted from Koryŏ and this greatly influenced the negotiation. Seo-Hui insisted that Koryŏ be able to recover territory from the Daedong to the Yalu river as successor to Koguryo25, because Khitan had occupied the Liaodong Peninsula, which had also been territory once under the dominion of Koguryo. Khitan promised to do this on the condition that Koryŏ give up its diplomatic relationships with Song. Three years after having established this diplomatic relationship with Khitan, Koryŏ minted iron coin in 996 in response to the rapid growing demand for Khitan trade and also simultaneously minted bronze coin to keep up trade with Song (see Table 1)26.

In 993, Liao provided gifts of 10 heads of camel, 100 heads of horse, 1,000 heads of sheep, and 5000 bolts of silk. Then, in April of 996, Koryŏ decided to mint iron coin. Koryŏ became the center of export-import silver circulation after the battle of Gwiju in the third Koryŏ – Khitan war. Koryŏ had 20,830 against 100,000 Khitan soldiers, but Khitan’s casualties added up to almost 90,000. The third Koryŏ – Khitan war (1018) formed the watershed of the trends of international trade in East Asia. After establishing friendship in 993 under diplomatic negotiations with Khitan, Koryŏ thoroughly prepared for another war against Khitan during 1010-1018, after the first war had ended in establishing a friendly relationship27.

In December of 1018, 100,000 Khitan troops under general Xiao (蕭孫寧), who was the Khitan emperor’s son in law, crossed the Yalu river into Koryŏ, while Koryŏ imported huge volumes of furs and horses from the Jurchen for winter troops. Koryŏ urgently requested help from Song, but Song rejected to send anything28.

The Khitan army met 208,300 of Koryŏ’s soldiers in YongJu (寧州) of Pyungan province, led by Gang Gam Ch’an (姜邯贊: 948-1031), who was 70 years old at the time. The Khitan army reached the garrison of Heunghwajin (興化鎭), where they found a river. General Gang selected a group of 15,000 troops on horseback and made a dam out of cowhides imported from the Jurchen, blocking the stream until the Khitan began to cross it. He then discharged the dam’s water as the Khitan army was in the middle of river. Old General Gang led a massive attack, in which most of the enemy was destroyed. From this

24 Koryŏ-sa 942. 10.
25 Koryŏ established the first national state after the collapse of Koguryŏ on the Korean peninsula in 918, but there were a lot of military struggles in the northern area among the various nomadic groups. The officially diplomatic relationship between Koryŏ and Liao was set up in 993. Before 993, Koryŏ did not approve the request from Liao, because of her invasion against Pael Hae (渤海) which was a very important trade partner for horses and silk with Koryŏ.
26 Koryŏ-sa 993.10. Cloth and grain had long performed the function of currency in Korea, but the first attempt to circulate metallic currency on any scale came in 996 when the government put iron cash into circulation and prohibited the use of coarse hemp cloth as a medium of exchange
27 In 1009, political turmoil in Koryŏ gave rise to the assassination of King Mokchong, providing the Khitan with the opportunity to invade Koryŏ, but the main reason for invasion was to put an end to the monopolistic intermediate trade between the Song and the Jurchen
28 Koryŏ-sa 1017. 07.
time forth, the nomadic Steppes never again invaded Koryŏ until the Mongol invasion of the mid-13th century.29

From the late 10th century, Koryŏ and Song both triumphed over their northern rivals and strengthened their southern bases, opening them for international trade. Both of them mutually approved their independent sovereignty in order to unify the currency system on the basis of a bronze coin standard, but Koryŏ minted iron coin simultaneously with bronze coin. This forms a notable difference to Song, as Song’s zone of bronze coin separated from the belts of iron-currency zones was forbidden.30

Table 1: The minting of iron and bronze coin with sovereign inscription in Koryŏ

<table>
<thead>
<tr>
<th>Sovereign inscription</th>
<th>Material</th>
<th>Date</th>
<th>Dimensions</th>
<th>Preserving institute</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kwon Won Jung Bo : T'ongGuk(乾元重寶: 東國)31</td>
<td>Iron</td>
<td>996</td>
<td></td>
<td>Bank of Korea</td>
</tr>
<tr>
<td>Kwon Won Jung Bo : DonGuk(乾元重寶: 東國)</td>
<td>Bronze</td>
<td>996</td>
<td>26 27 2.53</td>
<td>Bank of Korea</td>
</tr>
<tr>
<td>Kae Won T'ong Bo(開元通寶)</td>
<td>Bronze</td>
<td>998</td>
<td>25 23 4.10</td>
<td>Fitzwilliam Museum</td>
</tr>
<tr>
<td>T'ongGukTongBo(東國通寶)</td>
<td>Bronze</td>
<td>1097</td>
<td>25 23 4.76</td>
<td>Fitzwilliam Museum</td>
</tr>
<tr>
<td>T'ongGukChungBo(東國重寶)</td>
<td>Bronze</td>
<td>1097</td>
<td>24 25 2.88</td>
<td>Fitzwilliam Museum</td>
</tr>
<tr>
<td>Hae Dong Won Bo(海東元寶)</td>
<td>Bronze</td>
<td>1097</td>
<td>25 25 1.96</td>
<td>Fitzwilliam Museum</td>
</tr>
<tr>
<td>Hae Dong T'ong Bo(海東通寶)</td>
<td>Bronze</td>
<td>1102</td>
<td>25 25 3.96</td>
<td>Fitzwilliam Museum</td>
</tr>
<tr>
<td>Hae Dong ChungBo(海東重寶)</td>
<td>Bronze</td>
<td>1097-1105</td>
<td>25 26 2.12</td>
<td>Fitzwilliam Museum</td>
</tr>
<tr>
<td>Sam Han T'ongBo(三韓通寶)</td>
<td>Bronze</td>
<td>1097-1105</td>
<td>25 26 1.86</td>
<td>Bank of Korea</td>
</tr>
<tr>
<td>Sam Han ChungBo(三韓重寶)</td>
<td>Bronze</td>
<td>1097-1105</td>
<td>26 27 3.23</td>
<td>Bank of Korea</td>
</tr>
</tbody>
</table>

Even though Koryŏ cut off all diplomatic relations with Song in 996, the trade relationship kept running well throughout the 11th century, for which the continuous circulation of bronze coin and periodic minting of them stands witness. The last record of Koryŏ re-minting bronze coin is that of 150,000 strings being re-minted in 1101 when silver vase-shaped coinage (銀甁) was first minted.

However, Song’s international trade in the first millennium started with the Shanyuan Treaty (澶淵之盟) in 1004 between the Song and Khitan which was one of the

29 Koryŏ-sa 1018, 10.
30 Richard Von Gahn, p.49.
31 On the back the meaning of inscription T'ongGuk is “Eastern country” represented a sovereignty of Korea with the inscription of HaeDong(Eastern Sea) and SamHan(Three States) Edgar J. Mandel, Cast Coinage of Korea Western Publishing Company, Lnc 1972 p.9.
greatest pivotal events for the so-called Chinese imperial tributary system. At that time the Song had almost lost their economic sovereignty because of their humiliation of the treaty, which forced the Song to pay 300,000 bolts of silk and 200,000 liang (approximately 7,500kg) of silver annually to Khitan. On the Song side, the 11th century was a “currency famine” highly related to the spill of precious metal, was not resulting from the rapidly growing demand for currency, as the use of money permeated all levels of society and all spheres of economic activity.

The Koryŏ defeating Khitan’s cavalry in 1018, when Khitan invaded in the third war, from this time when The Tripitaka Koreana was first carved, Koryŏ considered to be a way of bringing about a good fortune by invoking the Buddha’s help which signified a change of cultural center in East Asia. The hegemony for East Asian overseas trade had been taken over by the Koryŏ court.

In Figure 1 we can see how many merchants annually visited the Koryŏ court in its capital Kaesŏng, coming from west Sarassen to east Japan. In 1019, the year after having defeated Khitan, 200 merchants from Song Cheonzhou (泉州) and Fujian (福州) visited the Koryŏ court and brought tribute in the form of their region’s specialities, medicine, incense, etc. Japan brought 250 Koryŏ people back that had been captured by Japanese pirates, and the Jurchen and Chuliguk (鐵利國) devoted horses.

Fujian (福建), Jiangnan (江南), and Guangzhou (廣東) in southern Song were not only very famous places for silver production, southern Koryŏ also held many special silver villages (銀所). In East Asia, the circulation of silver was based on the production rates of these places from the 11th century to 13th century, and here we can also witness the

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32 Richard Von Gahn, p. 50.
34 Until the 10th century trade center had to be conducted through the ports between Koryŏ’s Kaesŏng (開城) and Song’s Dengzhou (登州), after defeating Khitan, Song’s Zaitun (泉州) had been the main partner port for Koryŏ’s Kaesŏng (開城).
35 Koryŏ-sa 1019.03.
36 Koryŏ-sa, Sejongsilrokkiriji, Yŏjiseŏngram
origins of chronicle shortages of silver. After the great defeat against the Khitan in 1018, Koryŏ became the strongest military empire in East Asia as Fu Pi (富弼; 1004-1083) well recognized. Around this time, the sovereignty of the Koryŏ court could have had a unique position in guaranteeing overseas trade and stabilizing the international monetary system.

Between Koryŏ’s Kaesŏng (開城) and Song’s Zaitun (泉州) there were two merchant groups. All of their exchange and account notes all had expiration dates. These groups had to periodically make a closing mutual balance to keep until their next transaction. This was a necessary precondition for double-entry book-keeping and the main reason for their exchange and account notes always having expiration dates. Except for commercial exchange notes, the Song paper note did not have the credibility, because although the range of paper money was enlarged to include most of the empire, it was not received well or welcomed by the public and failed to circulate at its face value.

The situation of the Koryŏ court differed from that of the Song court in regards of their monetary success. From the 11th century, the Koryŏ court had to annually host a busy reception, the scope of the foreign representatives covering the world from Saracen to Japan. In figure 1, the number of foreign visitors for trade is at its highest from the 1020s to 1030s. These visitors were mainly from the Jurchen Jin, trading horses, and from the Song, bringing various Buddhist books, jewelry from South East Asia etc. However the contribution rate of the Jurchen Jin and the Song reach different peaks. Immediately after the retreat of the Khitan in 1018, hundreds of Jurchen representatives visited the Koryŏ court, for instance in 1036, when the visiting number reached 877.

From the late 11th century, the Jurchen gradually built up their military power, the number of visitors at the Koryŏ court shrank, and instead, the merchants from southern Song, Fujian (福建), Jiangnan (江南), and Guangzhou (廣東) increased. In 1089, 226 merchants visited the Koryŏ court, most of them from Cheon zhou (泉州).

The monetary system of the Jurchen Jin was advanced in the same way as the Song’s system with regards to paper money and silver money. At first, the Jin employed copper coins, and then later silver and paper note were used. The emergence of commercial and clerical classes, merchants and monks, made them enemies of the government. Merchants and monks had been growing stronger during this period in which expanding commerce gradually required a more flexible medium of exchange than hard currency. The Koryŏ court did not hamper the free expansion of commerce.

The absence of a regulative sovereign power provides a unique point in Korean history. The other was the positive policy of financial aid and protection accorded the merchants by Buddhist nobility. And clergy tended to be most favored by the Koryŏ royal family. Buddhist temples moreover enjoyed various privileges through the money many rich merchants donated to them. In 1078, the ultimate symbol for the circulation of precious metals was built by the Koryŏ court in front of Huengwang temple: A golden

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38 Chuan-chou (泉州) was known to western traders as Zaitun, an Arabic transliteration of the Chinese characters Tz’u T’ung刺桐 is a species of Erythrina native to the tropical and subtropical regions. In Jibong yuseol (芝峰類說) is the first Korean encyclopedia published in 1614 written by Yi Su-gwang (李絟光 1563-1628) mentioned Tz’u T’ung刺桐 (Sunshine Tree) came from Chuan-chou (泉州).
39 Jun & Lewis 2008
40 Koryŏ-sa .1036.07.
pagoda of the weight of 342.61kg, composed of 86.41kg of gold on the outside plus 256.2kg of silver on the inside.41

In 1085, State Preceptor Taegak Kuksa (大覺國師: 1055–1101), whose posthumous title was Úich’ón (義天) and who was the favored fourth son of Munjong (文宗: 1047–1083), became a monk in Yongt’ong-sa Temple (靈通寺) upon his own request at the age of eleven. He started learning Hwaom (華嚴) in Koryŏ, and visited the Song empire for further education at the time of the golden pagoda in 1085. He arrived in Hang-chou (杭州), the capital city of southern Song later together with Cheonzhou (泉州). At the time that Úich’ón (義天) took merchants with him from Koryŏ, the governor was Su Tung p’o (蘇東坡: 1037-1101). Statesmen then were intended to oversee the domestic economy and had no idea about international trade amenities, so he listed up the “injuries” suffered by Song as a result of international trade with Koryŏ. Even though he argued strongly against mercantile enterprise in his tirades, Úich’ón (義天) made a gradual relaxation of the Song court’s restrictions on oversea trade possible, culminating in an enactment of 1085, authorizing ‘superintendents of merchants shipping from Hang-zhou, Ming zhou and Kuangzhou to issue permits for traders to go to Korea for commercial purposes and to bring in foreigners whose object is trade’. Writing in 1090, Su Tung p’o (蘇東坡: 1037-1101) begs for a return to earlier restrictions, but that remained an anachronistic plea.42

In 1097, Úich’ón (義天) returned to Koryŏ, establishing a minting institution for precious metals and preparing the circulation of vase-shaped silver money sealed by the Koryŏ sovereign.43 Úich’ón (義天)’s practices had a great influence on the circulation of silver money. In 1101, the Koryŏ court officially declared only the vase-shaped silver sealed by the government as a valid money in common use (see Figure 3), and forbade any currency without the government’s seal marks and silver seasoned with copper ratio. The vase-shaped silver currency with the government’s seal marks was called Hwalgu (閭口), like Koryŏ’s geographical configuration (compare Figure 3 with Figure 945). The weight of the vase-shaped silver currency was 600grams.46 The minting standard ratio between silver and copper was 80% silver plus 20% copper, but the value of minted silver was equal to the 100% silver ingot. The gap in value compensated for the minting silversmith’s wage.47

The period of the Koryŏ dynasty from 1101 to its fall at the hands of Yuan in 1287 coincided with the unique development of a bimetallic monetary system in East Asia, led by Koryŏ. The relative position of Koryŏ among the international monetary system in 11th century East Asia was at the highest level. Also, the Koryŏ minting techniques of the silversmiths were the best developed in East Asia, and were exported to the Jurchen from the early 12th century. After the treaty was signed, the hegemony of the international monetary system changed from bronze coin to silver, including the vase-shaped silver coinage of the Koryŏ court. The Koryŏ enjoyed this unique silver hegemony inside the

41 Koryŏ-sa. 1078.
43 Koryŏ-sa. 1097.
44 Koryŏ-sa 1101
45 混一疆理歷代國都之圖 Honil-gangni-yekdak-gukdo-jido
46 One gun (斤) = 16 liang (兩), 1 liang (兩) = 37.5grams.
47 Lee Guengik Yonyeosilgisul 李肯翊 燃藜室記述 (1778, vol.59)
shell of the two Sons of Heaven in East Asia. The minting technology of these silversmiths was exported to the Jurchen in the next year, 1102. The Koryŏ silversmith’s minting techniques were the best developed in East Asia.48

In the Koryŏ dynasty, international trade increased around 1012, at which time many Chinese and Japanese merchants visited the Koryŏ capital, which had the biggest overseas commercial harbor in the country, Byeokran port. (It has become one of the world’s most important commercial harbors.) There were about 100,000 households in the Koryŏ capital, and the capital city’s population was reaching 0.5 million in 1232 just before the evacuation of the capital due to Mongol invasion. It was a highly urbanized dynasty. The Koryŏ government transplanted all of the national treasures and the majority of Kaesong’s population onto KangHwa Island. The transfer of the capital in resistance to the Mongol threat greatly profited from the monk’s general proficiency in archery. It was also the arrow from a Koryŏ skilled archerer’s bow that killed General Sartai.

<table>
<thead>
<tr>
<th>Trading country</th>
<th>Import</th>
<th>Export</th>
</tr>
</thead>
<tbody>
<tr>
<td>Song dynasty</td>
<td>Silk, pearls, tea, spices, medicine, books, instruments, water buffalo</td>
<td>Gold and silver, ginseng, marble, paper, ink, writing brushes, high-quality ramie fabric, hemp, otter skins, silver ware, silver belt, celadon</td>
</tr>
<tr>
<td>Liao dynasty</td>
<td>Horses, sheep, low-quality silk, camels</td>
<td>Minerals, cotton, marble, ink and paper, writing brushes, ginseng, saddles, high-quality ramie fabric, hemp, silver wares, silver belts, celadon silversmiths</td>
</tr>
<tr>
<td>Jurchen</td>
<td>Gold, horse, camel weapons, seal skins</td>
<td>Silver, cotton, silk, rice, saddles, high-quality ramie fabric, hemp, silver ware, silver belts, silver smiths</td>
</tr>
<tr>
<td>Japan</td>
<td>Mercury, minerals, gold</td>
<td>Ginseng, books, writing brushes, high-quality ramie fabric, hemp, rice, silver ware, silver belts, celadon, incense burners of celadon silversmiths</td>
</tr>
<tr>
<td>Sarracen</td>
<td>Camels, silk</td>
<td>Ginseng, books, high-quality ramie fabric, hemp, otter skins, silver ware, silver belts, celadon, incense burners of celadon</td>
</tr>
</tbody>
</table>

Table 2 The Items of international trade recorded in Koryŏ-sa (996-1392)

The emergence of silver coinage in Koryŏ Korea and Jurchen Jin was greatly stimulated in the early 12th century by Koryŏ’s lead, followed by the Jurchen after about 1102. 10.

48 Koryŏ-sa 1102. 10.
one hundred year. The military success in keeping peace with the Khitan/Liao need to pay for armies, or, alternatively, to buy the invader’s food during the Jurchen Jin’s occupation of Kaifeng (開封) formed the momentum for this. Before the re-conquering of mainland China by the Jurchen Jin in, Koryŏ became the first state with a silver coinage empire in East Asia in 1101.

While Jurchen Jin had a short-lived single national silver currency for a brief period during the reigns of Changjong Cheng'an(承安:1196-1208), Koryŏ’s currency has an unbroken history of over 300 years (1101-1401), and these different historical legacies have consequences for the 16th century silver story. At the begin of the Jin empire, only old coins of the Liao and Song realms were used as currency, but from the 1150s, paper money (jiaochao 交鈔) was introduced, and the Jin emperors had casted their own coins, like the Zhenglong yuanbao (正隆元寶) and the Dading tongbao (大定通寶) coins. From 1197, a silver currency (Cheng'an baohuo 承安寶貨) was in use. Even the practices of silver money in Jurchen Jin were very important for monetary history, but unfortunately, no actual Cheng'an baohuo (承安寶貨) have survived.

From the 11th to 13th centuries, Korean big business groups enjoyed the advantages of their sovereign government being international market friendly. For example when the Song embassy was sent in 1078 with two “divine ships (神舟)” vessels of unusual size and magnificence, they received a tumultuous welcome because they were so generous with their gifts that even the divine ships were inadequate to contain them, whereupon the envoys requested that the more bulky items be exchanged for silver.

And also, the southern Song (1127-1279) lost their power as an empire completely, just keeping a highly commercialized zone around Hangzhou Fujian from the 12th century. Koryŏ’s relations with the Jurchen Jin (金:1115-1224) had always been based on friendly horse-faring trade from the 10th century. Jurchen Jin always entertained Koryŏ like a parental state. The Great Wall encouraged these positive connections and Koryŏ’s relations with the Jurchen Jin and the Khitan Liao, but negative effects developed for Song. That is the main reason why Song became a powerless empire from the 10th century. Koryŏ and Song simultaneously started to trade overseas from the 10th century. That is why there is little doubt that the tenth century provided a major stimulant to overseas trade, but Song failed to sustain their overseas trade when they returned the center of power to their capital in Kaifeng (開封) back in north central China. Koryŏ, on the other hand, succeeded in keeping Kaesŏng as a maritime economic center for the duration of 915-1276.

Until the mid-10th century, the de facto East Asian currency had been the Chinese bronze coin. At one time, 90 percent of all international transactions in East Asia were denominated in bronze coin. The Chinese bronze coin had also been East Asia’s principal reserve currency, but from 1101, the bronze coin’s dominance had begun to be eroded by the coined silver currency from Koryŏ, combined with silver ingots, which represented a

50 Peng Xinwei p.465.
52 1117 Koryŏsa
larger size economy, and had the prospect of more countries adopting it as international currency because it belonged to a free international trade economy. From that time on, its contribution to official reserves has risen as banks seek to diversify their reserves and trade in the silver-zone continues to expand54.

The southern Song (1127-1279) state produced only meager amounts of bronze coin, perhaps 2-3% of the total output of the northern Song. From 1161 onward the southern Song state increasingly relied on paper money, but did not create a single national paper currency system. The new types of paper continued to be denominated in coin units which were integrally linked to the Song state’s use of silver as the hard currency reserve backing its fiat money.55 But Koryŏ did create a national precious metal currency system which dominated both public finance and large-scale private international trade. The military stability of Koryŏ against northern people strongly helped open the way for the expansion of international trade and production of luxury goods which enables the court to make silver currency contribute to monetary stability in 11th to 13th centuries. Also bronze coin first minted in Koryŏ continued to prevail as the means of exchange for small-scale transactions which encouraged export-oriented prosperity based on the stability of the domestic food market.

The Second phase: a Silver Shortage in 14th -15th centuries

The Mongol invasions brought about a monetary instability, a shortage of silver seriously had adverse effects on credit and trade in Yellow sea, caused fundamental change for the use of money as well as the monetary system in Korean peninsula. The silver famine in Korea originated from 1231, when the national wealth had been pillaged by the Mongol army during six campaigns (1231-1270). Around the late 13th -14th centuries, most of silver in Korea drained out to Yuan56. From the late 14th century, the population and oversea trade in the southern provinces declined, and the urban economy was accosted by a sharp decrease in the availability of the use of vase-shaped silver coinage.

Without new mining exploitation, the value of Yuan paper money had depreciated since the Mongol’s ceaseless search for silver had caused prices to rise sharply, reaching a level greater than the year it was first issued in 1287. In 1289, the Yuan court sent an envoy to dig up silver in Koryŏ, but most of the silver mines were already empty57.

Paralleling with digging was the debasement of the vase-shaped silver currency with the sharp decline in its purchasing power and rapid rise in the prices of the commodities of daily life, especially clothes and rice. The Koryŏ court started to consider accepting clothes as a means of tax payment, which was already the predominant instrument of exchange in private small business as well. In 1331, the Koryŏ court

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56 Which brought about a serious silver famine, and the debasement of the vase-shaped silver coin helping the dynasty change from Koryŏ to Chosŏn. Many historians try to explain the reason for this change of dynasties based on the typical factor effects of terrible famines and epidemics, but the monetary instability originated in the drain of silver to the Mongols provides another reason for the change.
57 Koryŏ-sa 1289.04
officially declared that it would cease circulation of the previous vase-shaped silver currency (weight 600 grams), and instead announced a new small vase-shaped silver coinage (新小銀甁) as a new hard currency\(^58\). The value of the new small vase-shaped silver currency was equal to 15 bolts of clothes, but the people were against this policy of the government.

Table 3: The national treasures pillaged by the Mongol army in the first campaign (1231) Sources: Koryŏ-sa jeolyŏ 1231.08.29

<table>
<thead>
<tr>
<th>Official request</th>
<th>Gold (kg)</th>
<th>Silver (kg)</th>
<th>Vase-shape silver coin (kg)</th>
<th>Horses (heads)</th>
<th>Silk (bolts)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Payment for travel costs</td>
<td>Envoy  42.00</td>
<td>780.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>General  11.40</td>
<td>276.00</td>
<td>69.60</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Officers  29.40</td>
<td>852.00</td>
<td>72.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>82.80</td>
<td>1,908.00</td>
<td>141.60</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In 1271, the Mongols changed their name to Yuan and Kublai Khan set to invade Japan with Koryŏ naval army. Koryŏ provided 1000 war vessels, but they failed in their invasion when in 1281, 3500 vessels were destroyed by Japan. The campaign’s failure also brought about the most fateful loss of Kublai Khan as well as of Koryŏ’s national power. Especially the silver coinage sovereignty was forfeited, which gave rise to the structural transition of the Korean monetary system. From this year, the canonical name of the king always started with Chung (忠), which represented a pledge of allegiance to the Yuan empire court.

In 1275, Kublai Khan established a paper currency in China. The Yuan regime’s paper money had no expiration date, totally differ from the paper notes of the Koryŏ, the Song, and the Jin dynasty were fully convertible with metallic currency.\(^59\) Peng Xinwei explained the points in which it represented an advance over the Song and Jin’s paper money, but when seen from the Korean side, the Yuan paper money were not fully convertible with silver currency, which was seriously debased\(^60\).

In 1277, the Yuan court demanded that Koryŏ commence with gold mining, after which the Koryŏ court mobilized 11,446 gold diggers who produced 265.875 grams of gold during 70 days, adding up to a per capita average of 0.0026267 grams of gold per day. This adds up to 1 gram of gold per capita after working 380 days\(^61\). This mobilization of people for the unproductive mining of gold resulted in serious damage for the production of food, which escalated in an inflation of food prices. In 1287, Kublai Khan sent an envoy demanding the ban of silver currency, forcing the circulation of Yuan paper money. It was impossible for the Yuan to achieve a surprising success in establishing paper money as a medium of exchange while the silver content of the vase-shaped silver coinage of Koryŏ shrank.

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\(^{58}\) Koryŏ-sa jeolyŏ 1331.04.

\(^{59}\) Richard Von Glahn, p.51.

\(^{60}\) In 1275, beginning with the first loyal King Ch’ungyol (忠烈王), the Yuan controlled Koryŏ’s monetary system change from vase-shaped silver coinage to Yuan paper money through the system of royal marriages. Koryŏ’s sovereignty fell to that of a “son-in law” nation under the Yuan empire, and Koryŏ lost not only political sovereignty, but also monetary sovereignty over the currency, which was then simultaneously annexed to the Mongol imperial house.

\(^{61}\) Koryŏ-sa jeolyŏ 1277.01.
In 1287, Koryŏ had a disastrous famine in its Cholla province, but the King and his Yuan princess ignored this national calamity and enjoyed their hunting trip with 1,500 horses riding through the western region of Korea. Yuan officially ordered Koryŏ’s gold and silver be replaced with Yuan paper money and banned the use of metallic money in trade between Yuan and Koryŏ. Yuan’s forced circulation of paper money did not result in the value rising for vase-shaped silver currency, but caused bad silver currency mixed with copper to spread and accelerate the inflation. And also the value of silver bullion increased like a sky-rocket, affording the silver ingot with a unique currency role as a store of value, as a measure of value. The Yuan paper currency destroyed the function of the vase-shaped silver currency as a unique silver coinage in East Asia.

Ever since the first appearance of vase-shaped silver coins for overseas trade in the 11th century from Kaesŏng in the east to Zaitun (泉州 Cheonzhou) in the Yellow Sea, the critical medium of interaction often developed into exchange and account notes. These exchanges were not only due to the maintenance of commercial contacts between two regions, but were also based on the fact that silversmith’s techniques and mint administration between Southern Song and the southern part of Korea interacted in this Yellow Sea similar to the situation in the Mediterranean basin.

But the circulation of Yuan’s paper money in Koryŏ inevitably resulted in the decline of the urban growth of the economy. The great centers of maritime commerce in the southern part of Korea and southern China not only produced silver, but also grains because they located in the most productive agricultural regions. The Yuan’s main policy move to effectuate more rapid delivery of grain tribute to the north, the main goal for government finance changed into “food comes first and money next” but the Koryŏ court suffered because of the Japanese pirates plundering the rice cultivated in the southern provinces. The emergence of these pirates and the corruption among dominant social groups, especially among Buddhist monks, in the 14th century became the strongest enemies of the common people.

The shortage of silver continued on from the time that Mongol paper money was forced onto the Koryŏ market in 1287 to the flood time of silver from Japanese Iwami mines into Korea. The silver famine under the alliance with Yuan paper money caused nominal prices to take a long climb up due to the debasement of the vase-shaped silver coin combined with the heavy drain to the Yuan court, but under the new dynasty Chosŏn, the silver emission to Ming stopped because they changed the tributary system from the  

62 Koryŏ-sa jeolyŏ 1287.04.  
63 Koryŏ-sa jeolyŏ 1287.04 . Richard Von Glahn, p.58  
Mongolian system to quasi-commercial activities. The Ming was in dire need of the military horses imported from Korea.

In the 1430s, Ming adopted silver as a means of tax payment, while simultaneously paper currency vanished entirely from the private economy with the shutting down of the state’s mint. This resulted in the money supply being filled by entrepreneurs who minted their own “private coin”, proliferating counterfeiting.

However, the new dynasty, Chosŏn, kept a relatively healthy monetary system, enlarged mining quotas, tried to re-open numerous mines, and sent bureaucrats as mining inspectors to local mining areas. This active policy to increase silver production by the government made the most significant technological progress in 1436, the exploratory adaptation of new metallurgical technology. In the year following the first of the two dates, 1436, it is recorded that King Sejong used a new invention for separating silver from rich copper ore with the help of lead.

Meanwhile, the Ming government had a high demand for military horses for its campaigns against the northern Mongols in the late fourteenth and early fifteenth century. In fact, it has been shown that the issue of paper money based on the fund had originated from military horse trade with Ming. From 1401 to 1411, Ming requested 10,000 horses. In 1411, 30,000 bolts of silk and 20,000 bolts of cotton were paid for 10,000 horses. The domestic price for these horses in Korea was only 14,000 bolts of silk, leaving a government profit of 16,000 bolts, which were used as backing for the issue of paper money.

To benefit from the quasi-commercial trade with Ming and the innovation of mining techniques, the new dynasty, Chosŏn strengthened the sovereignty of the monetary system took the decisive action to issue paper money. At first, paper money was issued, copper cash soon followed. Because Ming China was particularly interested in Korean horses, most transactions with China were carried out in gold and silver used occasionally in inter-state trade. Gradually, gold and silver acquired in the horse trade circulated within the Korean peninsula, although conflicts with the Mongols at times interrupted trade during the early years of the Ming. With the trade keeping the balance in the black with Ming, the Chosŏn dynasty tried to transform the basic system from commercial life combined with urban life into agriculturally settled habitation in rural areas.

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68 The year 1451 marked the Duke of Saxony’s grant of the right to use a new invention for separating silver from rich copper ores with the help of lead in German. 1436 and 1451 are amazing times for the innovation of silver technology between Korea and German.
69 Chosŏn wangjo sillok TaeJong 11(1411) 01.20. Vol 1, p. 215
Table 5: The rapid depreciation of paper money 1412-1423

<table>
<thead>
<tr>
<th>Item</th>
<th>1412</th>
<th>1423</th>
</tr>
</thead>
<tbody>
<tr>
<td>High quality horses (per head)</td>
<td>450 sheets</td>
<td>1350 sheets</td>
</tr>
<tr>
<td>Copper coins (per string gwan)</td>
<td>10 sheets</td>
<td>30 sheets</td>
</tr>
<tr>
<td>Rice (per tu, about 6 liters)</td>
<td>1 sheet</td>
<td>10 sheets</td>
</tr>
<tr>
<td>Cotton cloth (per bolt, width about 32.80 cm, length about 16.34 meters)</td>
<td>30 sheets</td>
<td>100 sheets</td>
</tr>
</tbody>
</table>

As the official paper currency issued by the Chosŏn court turned out unworkable, the court decided to mint copper coins for the domestic market. In 1415 the Chosŏn government decided to mint Chosŏn t’ongbo (朝鮮通寶), imitated Tang and Koryŏ Kai-yuan (開元) coins. In order to prevent counterfeiting, people who sold 16 yang (about 600 g) of copper to the government mint would receive 160 mon (文 = 錢, 10 mun (文) = 1 yang (兩)) coins. Henceforth, the Chosŏn monetary system rebuilt the hard currency system with silver circulating in the form of ingots. 50 skilled and 100 unskilled craftsmen were employed in the royal mints.

What is a really interesting thing is the new dynasty, Chosŏn also coined iron currency in the shape of an arrowhead in 1464 like the mint of iron coin in 996 of Koryŏ court. The reason why she conducted in this fashion intended for showing the people King’s military sovereign, because paper money issued in 1401 could not easily circulate. Chosŏn court needed a symbol for collecting tax. (See Table 5)

It was expected that highly skilled craftsmen could mint 2,000 coins per day, skilled craftsmen 1,600, and less skilled ones 1,300. Mints were set up in the capital and at 15 local government seats. In a period of nine months (270 days) from November 1423 to July 1424, the amount minted was 457,000 nyang (兩) (1 gwan (貫: string)=100 nyang). The total amount minted in 1425 was 1,253,700 nyang. In this period, the total population was around 6,282,000 persons living in 196,975 households. Clearly, this production figure per capita was very low.

Another discrepancy can be found in the ratio between the price of mint metal and its nominal value. The ratio of raw copper to minted copper coins is 1.25:1, calculated from a record that states that 4,578 strings of coins required 35,765 gwan (貫) of copper (1 geun (斤)=16 nyang (兩)=600 grams). There is no doubt that the government made no attempt to gain any sovereignty from minting. For the copper coin, raw copper was imported from Japan, but the amounts imported were insufficient for minting and circulation. The Chosŏn dynasty promulgated the weight standards of copper coin per mon (文) is 0.25 fun (分) was equivalent to 0.15 grams.

71 Chosŏn wangjo sillok 世宗 113 卷 28(1446)年 9 月 27 日 Vol 4 p.711, Sŏngjong 宋宗 32 卷 4(1473)年 7 月 16 Vol 9 p.37
73 Chosŏn wangjo sillok Sejo 世祖 34 卷 10(1464)年 11 月 13 日 Vol 11 p.659.
74 Chosŏn wangjo sillok Sejong 世宗 25 卷 6(1424)年 7 月 26 日 Vol 2, p.616.
75 I would like to confirm here the relationship among the numbers 0.25(fun), 0.15(grams), 37.5(grams), 16(nyang), and 600(grams). The standards of weight and size of copper coin is not unique, but we estimated it as the data go on the provision of legal tender(續大典國幣用銅銭條), the unit of weight mon (文) is 0.25, I try to convert it into metric version 0.15grams. In the T’ang and Song dynasties there were ten lei 畝 to a
Table 5: The Inscription and Dimension of Chosŏn coin in 15th century

<table>
<thead>
<tr>
<th>Sovereign inscription</th>
<th>Material</th>
<th>Date</th>
<th>Dimensions</th>
<th>Preserving institute</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chosŏn t’ongbo(朝鮮通寶)</td>
<td>Bronze</td>
<td>1401</td>
<td>Height(mm)</td>
<td>25 24 2.69  The Fitzwilliam Museum</td>
</tr>
<tr>
<td></td>
<td>Bronze</td>
<td>1401</td>
<td></td>
<td>25 24 3.59  The Fitzwilliam Museum</td>
</tr>
<tr>
<td></td>
<td>Bronze</td>
<td>1401</td>
<td></td>
<td>24 24 3.85  The Fitzwilliam Museum</td>
</tr>
</tbody>
</table>

Throughout the fifteenth century, China and Japan opened themselves to the rise of private coinage. In the 1430s, China closed its state mints, even though the demand for small coin for petty business had increased, and the debasement of bronze coin also occasioned a sharp rise in the nominal price of goods, while counterfeiting networks spread out quickly. Japan relied on Chinese coins from the 10th century. Japan didn’t ever mint their own money. In 1429 the Korean ambassador marveled at the widespread use of money he witnessed76. But even though the Chosŏn court made considerable efforts to circulate paper money, the policy proved ultimately a failure within a short period of time. Paper money was not convertible and depreciated rapidly, forcing the government to frequently change the official exchange rates (see table 4).77

For confirming evidence of the fact that the Chosŏn government aimed at living up to Confucianism state ideals rather than at gaining a profit, relatively few indications of counterfeiting have been found in all of Chosŏn’s history, except for during the 19th century. Although some variance existed between Chosŏn copper coins, no debasement took place through the period of prosperity from 1423 to 1530, Koreans enjoyed a high equilibrium based on the development of the cotton textile industry and the relative stability of food prices78.

The Koryŏ court had relied on silver vase-shaped coinage (銀甁) for her currency, in contrast, no gold was used for currency in whole history, but the new dynasty Chosŏn began to circulate gold by the middle of the fifteenth century. The Koryŏ silver currency steadily debased until the fourteenth century and disappeared in the fifteenth century. The Korean-Japanese fabric trade for gold provided Chosŏn with relative prosperity in the 15th century. This prosperity reached its highest point during the reign of King Seongjong (1469-1494), and began to decline during the reign of Yeonsangun (1495-1504), who was dethroned due to extreme dissipation. The prosperity of Seongjong resulted from the transit trade of silver exported to China and gold imported from Japan. Amounts of gold imported from Japan from 1484 to 1492 are shown in table 6. The maximum amount of


76 Richard von Glahn, 1996, p.89. An interesting thing is the new dynasty, Chosŏn coined iron currency in the shape of an arrowhead. With commercial activities in Yi Korea conducted in this fashion, a money economy could not so easily develop. In 1401 currency was printed on paper made from the bark of the paper mulberry, in 1423 copper coins called “circulating treasure of the realm” (Chosŏn t’ongbo) were minted, and in 1464 iron currency in the shape of an arrowhead was introduced, but on the whole these were intended for government use in collecting taxesKi-baik Lee, translated by Edward W. Wagner, A New History of Korea, Harvard University Press, 1984, p.187.

77 Chosŏn wangjo sillok 世宗 20 卷 (1423年 6月 21 Vol 2, p.556.

gold imported in 1492 was 90 kg, the minimum in 1484 was 27 kg, showing that the amount of import increased 3.3 times over nine years.

**Table 6: Amounts of gold imported from Japan 1484-1492**

<table>
<thead>
<tr>
<th>Date</th>
<th>Gold (unit 錠,挺)</th>
<th>Cinnabar (unit 囊,駄)</th>
<th>Copper (geun 斤)</th>
<th>Date</th>
<th>Gold (unit 錠,挺)</th>
<th>Cinnabar (unit 囊,駄)</th>
<th>Copper (geun 斤)</th>
</tr>
</thead>
<tbody>
<tr>
<td>01/1484</td>
<td>45</td>
<td>12 (駄)</td>
<td></td>
<td>01/1489</td>
<td>70</td>
<td>1360 (駄)</td>
<td></td>
</tr>
<tr>
<td>07/1485</td>
<td>60</td>
<td>2537 (駄)</td>
<td></td>
<td>09/1489</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>05/1487</td>
<td></td>
<td></td>
<td></td>
<td>01/1490</td>
<td>82</td>
<td>524 (駄)</td>
<td></td>
</tr>
<tr>
<td>01/1488</td>
<td>62</td>
<td>220 (駄)</td>
<td></td>
<td>12/1490</td>
<td>100</td>
<td>300 (駄)</td>
<td>1100 (駄)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>03/1492</td>
<td>150</td>
<td>100 (駄)</td>
<td></td>
</tr>
<tr>
<td>Trade</td>
<td>Gold 1 yang (兩)=cotton cloth 30 pil (匹)</td>
<td>Gold 1 yang (兩)=cotton cloth 25 pil (匹)</td>
<td>(1484-1488)</td>
<td>(1489-1492)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>term</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

The places on precious metal mining which had been collected through the 15th to 16th centuries in Chosŏn Korea, were still rare and partial especially gold. The mines in the northern part of Korea were not bountiful in precious metals. The amount of mined gold in the 15th century was too small to compare with the amount of trade. In 1413, goldsmith Park reported the gold mining of three places to the Chosŏn court, saying that he produced 3.122 kg of gold while mobilizing 1,344 people through a period of 32 days in Anbyun (安邊). Per capita per day a total of 0.0724 grams was mined, in Yŏngheung (永興) 926 people produced 1.125kg in 23 days, making a per capita total of 0.0528 grams of gold, in Sŏju (瑞州) 998 people mined 1.14375kg in 30 days, making a per capita of 0.0382 grams of gold.80 In the case of silver, silversmith Lee annealed 168.75 grams silver with 30 people during 40 days in 1407, making a total per person per day of 1.40 grams of silver81.

The abandonment of mines was most frequently caused by low productivity which impacted profit vs. cost ratio. Eventually in the fifteenth century, since the Chosŏn court had to support textile trade in order to receive Japanese gold, relatively rich precious metals could circulate. Prior to the 1490s, silver seldom appeared on the market. But from the beginning of the 16th century, the profile of the market changed from gold to silver, when silver began to be frequently mentioned in price reports.

**Table 7 Price of Cotton and Hemp Cloth 1437-1489**

<table>
<thead>
<tr>
<th></th>
<th>Cotton clothes</th>
<th>Hemp clothes</th>
<th>Ratio of gold to silver (1437)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Domestic price (1465)</td>
<td>Export price to Japan (1489)</td>
<td>Domestic price (1437)</td>
</tr>
<tr>
<td>Gold 1 錠</td>
<td>30</td>
<td>25</td>
<td>30 (匹pil)</td>
</tr>
<tr>
<td>Gold 1 gram</td>
<td>13.072</td>
<td>10.897</td>
<td>13.072 (meter)</td>
</tr>
<tr>
<td>Silver 1 錠</td>
<td></td>
<td>4 (匹pil)</td>
<td></td>
</tr>
<tr>
<td>Silver 1 gram</td>
<td></td>
<td>1.743 (meter)</td>
<td></td>
</tr>
</tbody>
</table>

79 The Chosŏn weight unit 鈞 (錠) weighed 600 grams (16 nyang),
80 Chosŏn wangjo sillok 太宗 13(1413)年 3月 12日 Vol 1, p.666
81 Chosŏn wangjo sillok 太宗 7(1407)年 10月 19日 Vol 1, p.419
During the first half of the 15th century Korean silver economy began to distinguish a new face escaped from the depression under the dark Yuan policy, when silver held a new attraction because of the gold/silver ratio. In Table 7 we can see the ratio of gold to silver in 1437 which became 1 to 7.5. Before fabric trade for gold with Japan, the purchasing power of silver relatively low, the relative values of silver in early 15th century were in the ratio of 1 to 11.1-11.7 (See figure 4), but Chosŏn merchants could not utilize this as a new profit source to maximize their purchasing power, because silver became the monopolistic means of finance for the Chosŏn court. The speculative flow of silver from the southern Cholla province to Fujian was certainly one of the more high risk profits, stimulating the smuggling element of East Asian overseas trade from the late 14th century to the early 15th century, in league with Japanese pirates.

Why did silver re-emerge in the 15th century? The Yuan regime of paper money marked a definitive break from the bronze currency that had underlain the Chinese economy since the beginning of the imperial era and set the stage for the transition to the silver economy of Ming and Qing times. The quasi-commercial and state-monopolistic alliance between the Chosŏn and Ming court was also a decisive factor for international exchange against private level trade by merchant groups. This government monopoly had developed a new silver smelting technology, but the spread of the technique had been completely banned. This technical factor could not make a boom of silver. The supply of precious metal did not overtake the demand of it for government finance and trade until the 15th century.

The reason why the gold/silver ratio gaps mark their highest points during the silver famine is due to the fact that gold was relatively well circulated before the early sixteenth century and international trade between Korea and Japan primarily consisted of exports of Korean cotton textiles to Japan in return for Japanese gold, but after the transfer of the silver smelting techniques to Japan, this basically changed the vectors of the ratios.

Even silver value was so high in 15th century after fail of paper money before silver boom the monetary currency silver scarcity developed mining boom but productivity not so good court developed the trade the gold and cotton trade in 15th century between Korean and Japan gold fluent gold stimulating the silver scarcity encouraged.

The East Asian War (1592–1636) was one of the most destructive conflicts in Korean history and formed the watershed of the ratios transfer. The war was fought primarily (though not exclusively) in Korea and at various points involved most of the East Asian nations. Naval warfare also reached overseas and shaped the separation of Japan in the east (see figure 4).

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By that time the industrial leadership assumed by the Koreans in mining and metallurgy in the age of the Renaissance was already on the wane. Japan was becoming the chief power in the mining industry. The economic influence of the Koreans outside of north eastern Asia was on the point of eclipse. The Korean practice of recording prices in silver actually is convenient for a comparative price history in East Asia, although possibly not for Japan. A monetary dataset over a long time span enables us to explore why Chosŏn Korean development did not lead to Western-style modernization even though a developed copper coins system existed for small-scale trade.

Precious metal scarcity during the 14th-15th centuries was not an era of stark deflation with intervening periods of inflation because textile served as the supplementary fiat money. However, the circulation of bad textiles increased the purchasing power of precious metal, especially silver, and the purchasing power of cotton textile money decreased in that most of the standard moneys of account in which prices were expressed were tied to the currently circulating cotton textile bolt.

With the discovery of rich mines in west Japan in the early16th century, the chief source of supply shifted abruptly from inside the East Asian continent to the Japanese island, at a time when smuggling and pirates were usually required to make the high risk maritime journey from Korea across the Yellow Sea.

Table 8: The development of the monetary system in East Asia (900-1550) based on Korean Sources

<table>
<thead>
<tr>
<th></th>
<th>Northern China (Nomadic groups)</th>
<th>Korean peninsula (Bidge the gap between nomade and agricultural groups)</th>
<th>Southern China (agricultural groups)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gold</td>
<td>Khitan/Liao (916-1115), Jin (1115-1225), Mongol Yuan (1225-1367)</td>
<td>8-9th centuries 15th century</td>
<td>Southern China (agricultural groups)</td>
</tr>
<tr>
<td>Silver</td>
<td>Khitan/Liao (916-1115), Jin (1115-1225), Mongol Yuan (1225-1367)</td>
<td>10th-19th centuries</td>
<td>Southern China (agricultural groups)</td>
</tr>
</tbody>
</table>

83 This fact make a sense for why Japan only have a success for modernization like Europe, because of the silver coins and gold coins circulation in Europe whose size and purity varied by time and place. That is why we have some suspicition about Japanese price information. Peng Xinwei, A Monetary History of China, translated by Edward H. Kaplan, Vol 2 597. Western Washington University, 1994.
Iron coin  Khitan/Liao (916-1115)  Koryŏ (1101-1400) issued in 996

Seal marked silver currency  The Jurchen Jin (1196)  Koryŏ (1101-1400), first issued year: 1101

Sovereign seal marked copper coin  Khitan/Liao (916-1115), Jurchen Jin (1115-1225), Mongol Yuan (1225-1367)  Koryŏ (993-1271), first issued year: 993, Chosŏn first minted: 1423  Song (954)

Government issued paper money  Yuan  Chosŏn (1392-), first issued year: 1402  Ming

Government issued textiles money  Supplementary money during Koryŏ, Chosŏn (1392-)

### Conclusion

This paper reports on the Korean monetary transition from the rise of the oversea trade led by Buddhist Korean merchants in 11th -13th centuries to the stability of the agricultural society established by the Confucian bureaucracy in 15th -16th centuries. Medieval dynasty Koryŏ was the first country to issue silver coinage in East Asia and to circulate it during three hundred years (1103-1400). The most famous merchants of Koryŏ came from North Korea’s Kaesŏng city, which, from the 10th century onwards, became a subject for international trade of the seaborne trade as well as continental caravan traffic, but early modern dynasty Chosŏn remarkably stable over time, did not actively respond to the international market forces.

The historiography of the function of Korean money shows playing a role for the monetary use of precious metals emerged in the context of the weights and measures developed in the Buddhist temples and palaces as part of their account-keeping and administered prices. Money was a “public good” used to price rations and other resource flows, to value handicrafts and inventories advanced to merchants, and to consign other activities to managers in the system.

The story of how Koryŏ came to monetary power in East Asia is made more understandable by comparing the process with the Song dynasty 40 years later. The military reunification of Koryŏ was achieved through diplomatic motions instead of war. The founder of the Song dynasty Zhao Kuangyin (趙匡胤:960-976) grew up with a military office background, but Wang Geon (王建:918-943) retained his commercial negotiation positions. He was very familiar with the boundless authority created by international trade, and was not just a nominal emperor like the Chinese mainland government.

The geographical location of the Korean peninsula played a very important role for military expansion from the Northern Steppes and commercial trade between sea powers and continental powers, especially when concerning silver circulation. Ironically, and despite the existence of the Great Wall, the real owners of the Chinese mainland after the 10th century were almost always from northern nomadic tribes. The exceptional cases are the northern Song (960-1127) and the Ming (1368-1644), but they did not try to establish a sovereign silver currency as a symbol of the empire’s power, even though the
empire enjoyed high level profits through the silver circulation. They continued to rely solely on the circulation of bronze coin and paper currency as the common medium of international trade. Especially the northern Song dynasty’s position as an empire is not clear because on the Korean side, sources tell us that they gave up their state as an empire themselves. The northern Song dynasty kept its position as an empire only during 30 years of the Koryŏ (963-993) period. Koryŏ severed all diplomatic relationships with Song, even though Song demanded it remain a vassal state.

This paper raises an attention to the characteristics of the Korean monetary system which seem to differ from the history of Chinese monetary system:

“The three centuries between the Tang-Song transformation and late imperial China (roughly 1100 to 1400) remain a black hole in the sense that they are meaningfully linked neither to the dynamic of the preceding Tang-Song transformation nor to the subsequent developments in the Ming (1368-1644) and Qing (1644-1911) dynasties.”

As many East Asian specialists have already pointed out, it is too difficult to find a dynamic transition for the monetary history of East Asia, however, by taking Korean historiography we can try to illuminate the black hole and find “the dark Sino-centric bias” which has concealed the regional diversity and global interdependence of pre-modern East Asia. This Sino-centric bias led to the viewing of the nomadic Steppes as aliens and the commercial trade system as a tribute system. Owing to it, few people are aware that there was a real relationship between Koryŏ (918-1392) and the Jurchen Jin (1115-1224), which was reunified in late Chosŏn (1634-1910) and Qing (1644-1911).

Chinese bronze coins were cast rather than struck, equipped with a (usually square) hole in the center, lacked visual imagery beyond a few letters, and were not normally minted from precious metals: they consisted primarily of bronze (and sometimes iron), whereas gold and silver money circulated in the forms of ingots, but Koryŏ’s type of coinage was characterized by its vase-like shape, and was made up of solid, round objects endowed with varied visual imagery and manufactured from silver. Silver quickly became the dominant metal with the emerging Koryŏ coinage. Also, the period brought forth an extraordinary rise in production of ceramics, lacquer wares, Buddhist paintings and sculptures, illustrated manuscripts, and metal crafts, also in light of this theme. Perhaps most familiar to the West from Koryŏ dynasty are the pale green ceramics known as celadons.

There are no records of one side paying tribute to imperial China before 1392 on the Korean side except for during the time of the Mongol invasion. And also, Koryŏ (918-1392) and Song (宋:960-1279) had a different monetary system. Song had a multiple currency system encompassing bronze coin, paper notes, and uncoined silver. Koryŏ also had bronze coin with her own minted coins, and silver coinage which hasn’t been very well reported in the Western academic world.

The evolution of silver money extends across the space of East Asia and across the time from the 11th-14th centuries, which may provide new perspectives on global networking. Unlike the limited number of earlier studies on East Asian monetary history, this new insight on the circulation of the silver vase-shaped coin (銀瓶) of Koryŏ

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84 Richard Von Glahn, 2003, p.35.
(918-1392) will make the linkage between bullion inflows and the living standard clearer. This paper investigates the fact that the silver vase-shaped coin (銀甁) of the Koryŏ dynasty (918-1392) constituted the fundamental form of money during three hundred years (1103-1392) in East Asia.

Koryŏ’s general acceptability of metallic money in effect reduced transaction costs, caused high urbanization, and encouraged overseas trade by stimulated the expansion of trade. The capital city of Koryŏ, Kaesŏng, was a seaborne international trade center from the 10th to the 13th century and also received continental caravan traffic. Although this was an area of social and cultural diversity, and rooted in many different civilizations, seaborne trade and continental caravan traffic had created a strong sense of unity centered on Kaesŏng.

The historiography of the sovereignty of Korean money shows two different trends. The vase-shaped silver coin with silver ingots during the 11th -13th centuries provided the international market with autonomy for overseas trade. From the 17th to the 19th century, Korean monetary policy focuses on the stability of food prices, but there was a “silver famine” and a “silver boom” at two distinct periods (15th-16th).