

About the data file for
 “Labour cost, land prices, land rent, and interest rates in the southern region of Korea”
 by S.H Jun & J.B Lewis

Background

The gathering and analysis of quantifiable data on Korea’s pre-modern history (pre-1850) is still in its heroic age. From the early 1990s, the document collection has grown and lately advances have been made in extracting data. In 2002, S.H. Jun and J.B. Lewis began a special project at the Academy of Korean Studies (AKS, web address: www.aks.ac.kr) to create bibliographies of old documents and compile databases on prices and wages. The Academy, founded by the government of the Republic of Korea on June 30, 1978, is at the forefront of research and teaching on pre-modern and modern Korea in the fields of history, literature, and the social sciences. Its primary aim has been to overcome the ethical confusion that has emerged alongside rapid industrialization. In recent years, many private records and documents from post-1600 Korea have been gathered and published in photolithographic form. The Academy has been collecting, microfilming, and publishing private, non-governmental records for decades from its first publication in 1981. So far, the Academy has published volume 64 in the massive *Komunsŏ chipsŏng* (Collected historical documents), but there has been little research on these documents from the perspective of economic history.

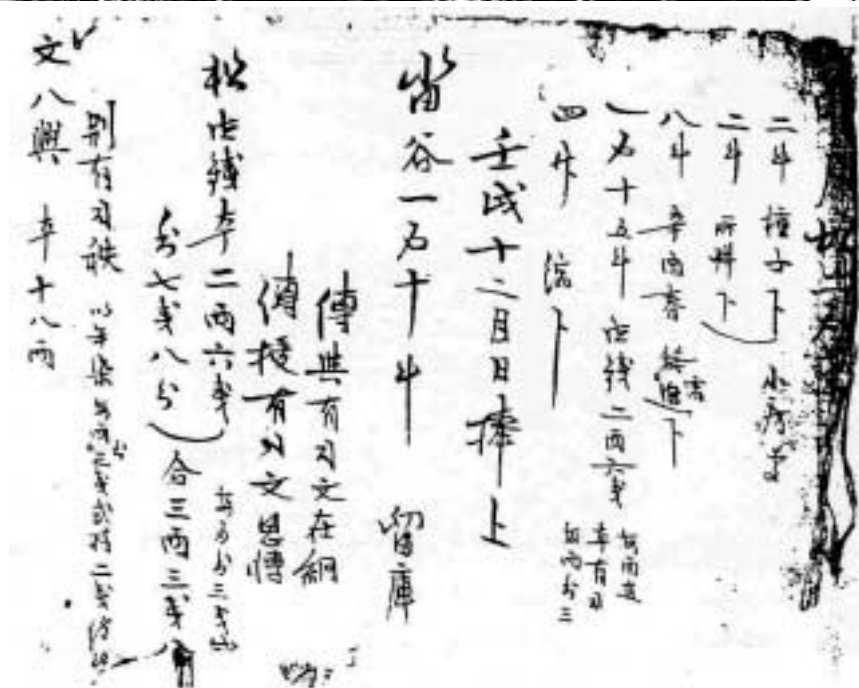
The various account books reproduced in the *Komunsŏ chipsŏng* have presented us with rich sources of data for economic history. Most of these accounts were kept by cooperative or mutual assistance associations called *kye* in Korean. The associations were widely developed in the period 1598-1910, or in the late Chosŏn Dynasty. The associations provided social welfare and functioned to celebrate good harvests, to worship divinities that would benefit the entire village, and to celebrate the elimination of evil spirits, but the chief purpose of the associations was to provide insurance against unforeseen calamity. Among the various accounts, the books of the Mun Clan Associations of Chang’am Village in Yŏng’am county, South Chŏlla Province stand out for their accounting accuracy and coverage (early eighteenth century to the present). At least from the late sixteenth century, the county contained numerous single-clan villages and has been famous for its many clan and village associations organized by rural scholars. Nearly all villagers were integrated into the mutual association system. Village associations were horizontally organized and included all village members, whereas clan associations were vertically organized and excluded non-clan members. The accounts of the associations are their most important archives, because these recorded the administration of communal property. Table 1 lists the account volumes presently available. The accounts have been kept in a sophisticated double-entry form. It is for this reason that the data gathered from these accounts have formed the core of the Jun-Lewis databases. Illustration 1 A & B provide an example with translation in Table 2.

Table 1: *Yŏng’am Chang’am-ri Namp’yŏng Mun-ssi yonghagi* account books

Number of volume	Chinese characters		Recording period
Volume 1	族契 用下記	Account Books of the Head Clan	1741-1765
Volume 2	族契 用下記	Account Books of the Head Clan	1779-1805
Volume 3	族契 用下記	Account Books of the Head Clan	1806-1816
Volume 4	族契 用下記	Account Books of the Head Clan	1843-1850
Volume 5	族契 用下記	Account Books of the Head Clan	1850-1872
Volume 6	族契 用下記	Account Books of the Head Clan	1884-present
Volume 7	小宗契 用下記	Account Books of the Collateral Branch Clan	1819-1826

Volume 8	小宗契 用下記	Account Books of the Collateral Branch Clan	1827-1842
Volume 9	小宗契 用下記	Account Books of the Collateral Branch Clan	1845-1864
Volume 10	小宗契 用下記	Account Books of the Collateral Branch Clan	1864-1883

Illustration 1 (A and B) 1741 Accounts



Source: Han'guk Chǒngsin Munhwa Yǒn'guwǒn, ed., *Komunsǒ chipsǒng* vol. 21 (Collection of documents, vol. 21) (Sǒngnam: Han'guk chǒngsin munhwa yǒn'guwǒn, 1996): 576-577.

Table 2: Original Text and Translation for 1741 Accounts

Line	(Grass writing converted to square-hand style)		All rice given as unhulled rice 租 [units: <i>tu</i> , <i>sŭng</i> , <i>hop</i>]	
1	辛酉十二月 日 捧上		1741.12 [start of the fiscal year]	
2	畚穀二石五斗	合二石七斗 留[庫]	[rent revenue] 2 <i>sŏk</i> 5 <i>tu</i> [45.00 <i>tu</i>]	Total 2 <i>sŏk</i> 7 <i>tu</i> remaining [in the storehouse] [47.00 <i>tu</i>]
3	文在敏後入租二斗		received from Mun Chaemin 2 <i>tu</i> [02.00 <i>tu</i>]	
4	傳與有司文在敏		transferred from the bursar Mun Chaemin	
5	傳授有司文在綱		given to the bursar Mun Chaegyŏng	
6	別有司秩 (<i>pyŏl yusa chil</i>)		[Items] specially managed by the bursar (units: <i>yang</i> , <i>chŏn</i> , <i>pun</i>)	
7	文八成本十兩又八兩		[18 <i>yang</i>] [loaned to] Mun P'alsŏng: the principal of 10 <i>yang</i> , and an additional 8 <i>yang</i>	
8	文在質本十兩		[10 <i>yang</i>] [loaned to] Mun Chaejil: the principal of 10 <i>yang</i>	
9	文在綱本十兩一錢七分		[10.17 <i>yang</i>] [loaned to] Mun Chaegyŏng: the principal of 10 <i>yang</i> 1 <i>chŏn</i> 7 <i>pun</i>	
10	文在敏本十兩		[10 <i>yang</i>] [loaned to] Mun Chaemin: the principal of 10 <i>yang</i>	
11	□□□山直二兩		[2 <i>yang</i>] [loaned to] grave-keeper: [the principal of] 2 <i>yang</i>	
12	留庫租二石七斗		remaining in the storehouse: 2 <i>sŏk</i> 7 <i>tu</i> [47.00 <i>tu</i>]	
13	二斗種子下	小房處	[2.00 <i>tu</i>] 2 <i>tu</i> for seed	[for the] Sobang [land]
14	二斗所耕下		[2.00 <i>tu</i>] 2 <i>tu</i> for annual production cost to tenant	
15	八斗辛酉春祭需進下		[8.00 <i>tu</i>] 8 <i>tu</i> for things needed in the spring sacrificial service	
16	一石十五斗作錢二兩六錢每兩置本有司每兩利三		[35.00 <i>tu</i>] 1 <i>sŏk</i> 15 <i>tu</i> traded for copper 2 <i>yang</i> 6 <i>chŏn</i> , loaned to the bursar at 30% interest per annum per <i>yang</i>	
17	四升縮下		[0.40 <i>tu</i>] 4 <i>sŭng</i> depreciation	
	[Total 47 <i>tu</i>]		[47.40 <i>tu</i> total]	[error = 0.40]

NB: 1 *sŏk* = 20 *tu*Source: Han'guk Chŏngsin Munhwa Yŏn'guwŏn, ed., *Komunsŏ chipsŏng*, vol. 21 (Collection of documents, vol. 21) (Sŏngnam: Han'guk chŏngsin munhwa yŏn'guwŏn, 1995): 576-577.

By gathering, indexing, and analysing price and wage data from the southern, main rice-producing regions of Korea, Jun and Lewis intend to create reference tools to locate documents and data, and provide an overview of the development of prices and wages. An initial list of goods and bibliography of documents will be published in 2004, covering the years 1700-1900. From 2002, the project has been associated with the Global Price and Income Project, organized by Peter Lindert, Jan Luiten van Zanden, and Robert Allen. The collection of price series in Korea is beginning. We welcome any comments and suggestions. Through support from the National Science Foundation(NSF) new series will have been added over region and time.

The data file for rice prices, wages, land prices, and land rent

Rice prices

Rice was the most important commodity in the pre-modern, domestic Korean market. Rice prices recorded in rural markets were usually prices for unhusked rice (for seeding, etc.), polished rice (for meals and wine), and glutinous rice (for cakes and candies). These various forms represent differing degrees of polishing or closer and closer steps to an end product that is edible. The volume of the measure—*sŏk* (石, Korean bushel)—was 120 litres. The weight of a *sŏk* of unhusked rice was 50 kilograms. Unhusked rice lost 60 percent of its volume and 20 percent of its weight in milling to white rice. After milling, the volume of a *sŏk* of polished rice was 48 litres (120* 40%) and the weight was 40 kilograms. An individual labourer might have expected to consume about 210 grams of polished rice for three meals a day or 70 grams per meal.

Illustration 2 one *hop*(15C-1902): For measuring the rice volume



Sources: Kungnipminsok pangmulgwan, ed. *Han'guk ūi toryanghyŏng* (Seoul: Kungnip minsok pangmulgwan), 1997.

Area covered by the data and the sources for each location: For Yŏng'am (靈岩) (South Chŏlla): Han'guk Chŏngsin Munhwa Yŏn'guwŏn, ed., *Komunsŏ chipsŏng*, vol. 21 and 22 (Collection of documents, vol. 21 and 22), Sŏngnam: Hanguk chŏngsin munhwa yŏn'guwŏn, 1995. For Haenam (海南) (South Chŏlla): Han'guk Chŏngsin Munhwa Yŏn'guwŏn, ed., microfilm, reel no. 35-003205-003216. For Changhŭng (長

興) (South Chŏlla): Han'guk Chŏngsin Munhwa Yŏn'guwŏn, ed., microfilm, reel no. 006904. For Kosŏng (固城) (South Kyŏngsang): *Sŭngch'ong myŏngnok* (勝聰明錄). For Kyŏngju (慶州) (North Kyŏngsang): Han'guk Chŏngsin Munhwa Yŏn'guwŏn, ed., microfilm, reel no. 009574-009579. For Taegu (大邱) (North Kyŏngsang): *Taegu Tanyang U-ssi komunsŏ*.

Real Wages

We have compiled some records of nominal wages and will continue to construct wage data. The records directly report a great deal of labour information, but there are some problems. Some records are missing the number of days worked or the number of labourers employed. Depending on the type of work, we can estimate the time. For example, we estimate one day for work connected with rituals and one day for attaching or repairing locks by a blacksmith. For each day of work, we assume that labourers were fed five times. Some records record payment in kind (unrefined rice wine and food other than rice) in addition to cash, so their conversion to monetized units is difficult. Therefore, we have used only wages reported in copper values. We report gross and net wages. The gross wages are the cash element plus the consumables that were supplied while on the job (wine, tobacco, straw sandals, and food other than rice). The net wages are purely the cash element given to the laborer or what the labourer carried away. We can calculate the daily gross nominal wages in copper cash (cash + cash for wine + cash for tobacco + cash for side dishes) ÷ (days worked * number of labourers), and we can calculate the daily net nominal wages in copper cash (cash ÷ days worked * number of labourers). The copper cash wages have been converted to silver grams and their value in kilograms of rice. We have classified labourers as skilled (bamboo mat maker, blacksmith, carpenter, builder, plaster, mason, horseman, hypocaust builder, and utensil maker) and unskilled (porter, day labourer, errand boy, and day servant).

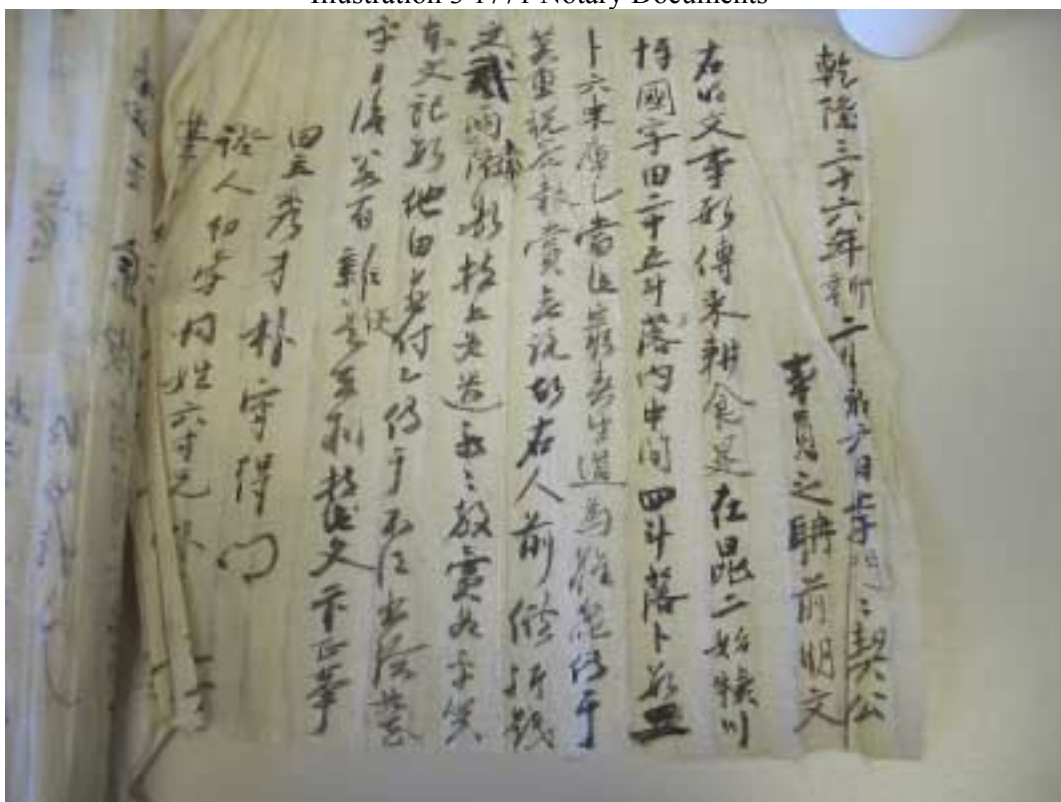
Area covered by the data and the sources for each location: For Yŏng'am (South Chŏlla): Han'guk Chŏngsin Munhwa Yŏn'guwŏn, ed., *Komunsŏ chipsŏng*, vol. 21 and 22, Sŏngnam: Han'guk chŏngsin munhwa yŏn'guwŏn, 1995.

Land prices

Land prices came from notary documents. Prices came from notary documents. Notary documents were legally required to contain the following information on land prices: 1) date of transaction (year, month, day); 2) buyer's occupation, family name, and given name; 3) method of obtaining land (by trade, from wife's family, from father, or land grant from government); 4) reason for sale (urgent financial need, continuous bad harvest, to pay for a daughter's wedding, funeral costs, or moving); 5) information on the site and registration (taxable amounts, seeding size, land classification into paddy, dry field, forest, possessing a house roofed with thatch or tile, number and type of trees); 6) price (currencies varied by period: copper, unhusked rice, silver in the 16th century, cotton in the 17th, rice and copper in the 18th, copper in the 19th, and rice, copper, and even yen in the 20th century); 7) any related documents attached, 8) owner's name and signature, guarantor's name and signature, and the names and signatures of the scribe and the notary. The data displays the average land price for one *turak* (0.16 acre) in a *sŏk* (50 kg. weight and 120 litres volume).

Transaction costs can also be determined. A land sale required a notary's fee, which was recorded in the 40,000 or more documents that the Academy of Korean Studies has collected on land and house sales. From an analysis of 15,000 documents thus far, in the eighteenth century, the land transaction cost per transaction was 0.2 to 0.27 copper *yang* (1.875 to 2.531 grams of silver). In the nineteenth century, the cost increased from 1.4 to 1.5 copper *yang* (13.125 to 14 grams of silver) per transaction, a growth of over 450 percent.

Illustration 3 1771 Notary Documents



Source: Yŏng'am Manghori(靈岩) (South Chŏlla-do) New discovery by GPI Project
 1) date of transaction (year, month, day): 06/Feb/1771, 2) buyer's occupation, family name, and given name: Auditor Lee Gydam ; 3) method of obtaining land : from Ancestor 4) reason for sale: suffering bad harvest 5) information on the site and registration: Yŏng'am County Gonyisimundokcheonpyung dry field, four turak(about 0.64Acre), price (copper two yang(silver 18.8grams), 7) any related documents attached, 8) owner's name and signature:Park Soodŭk, guarantor's name and signature: Brother The data displays dry field land price for one *turak* (0.16 acre) is 0.5 yang(silver 4.7grams)

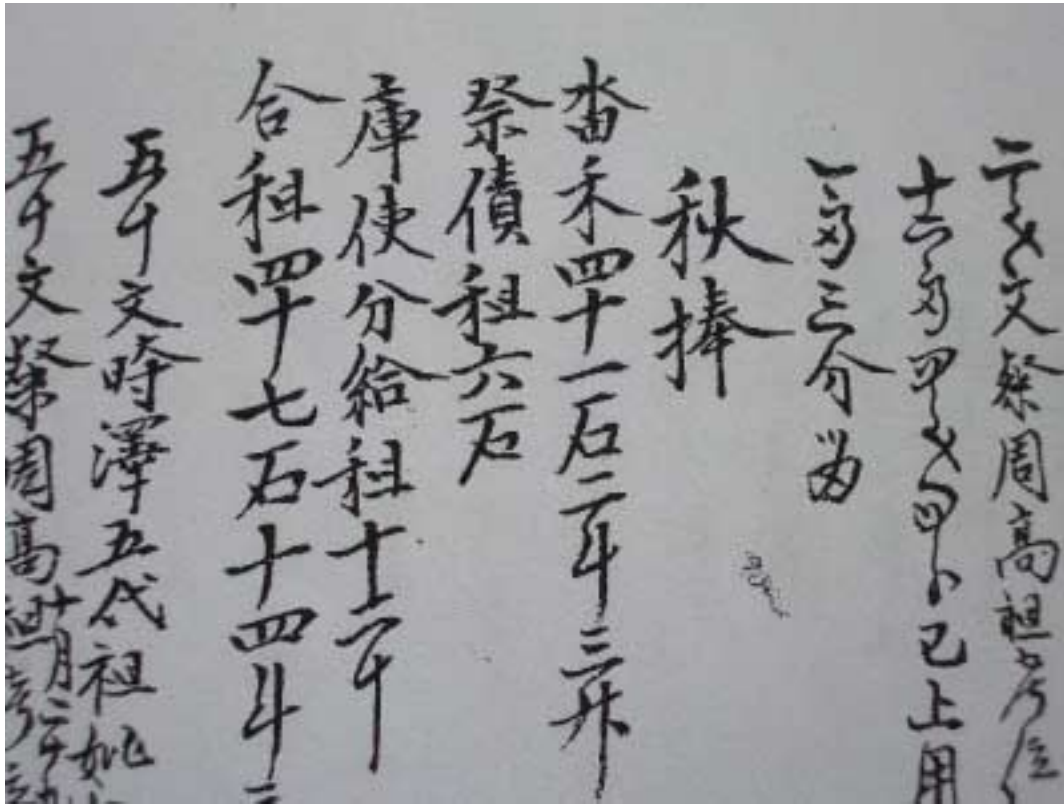
Area covered by the data and the sources for each location: For Yŏnggwang (靈光) (South Chŏlla): Han'guk Chŏngsin Munhwa Yŏn'guwŏn, ed., microfilm, reel no. 008064-1, land 009638. For Yŏng'am (靈岩) (South Chŏlla): Han'guk Chŏngsin Munhwa Yŏn'guwŏn, ed., *Komunsŏ chipsŏng*, vol. 21 and 22, Sŏngnam: Hanguk chŏngsin munhwa yŏn'guwŏn, 1995. For Kuye (求禮) (South Chŏlla) Han'guk Chŏngsin Munhwa Yŏn'guwŏn, ed., *Komunsŏ chipsŏng*, vol. 21 and 22, Sŏngnam: Hanguk chŏngsin munhwa yŏn'guwŏn, 1995 and Han'guk Chŏngsin Munhwa Yŏn'guwŏn, ed., microfilm, reel no. 35-005090-005102 and reel no 35-005179-005188. For Sangju (尙州) (North Kyŏngsang): Sŏnggyungwan University Museum manuscript

collection. For Kyŏngju (慶州) (North Kyŏngsang): Han'guk Chŏngsin Munhwa Yŏn'guwŏn, ed., microfilm, reel no. 009574-009579.

Land rent

Generally tenants paid 50 percent of their crop to the landowner, but depending on the area and the period, there are some differences. For example, there was a large cultural difference between south and north. In the northern provinces, in the spring, the owner was responsible for supplying seed, paying tillage costs, paying tax, and repairing irrigation works. These costs fell to the owner, because the harvest was divided in the field and the owner received straw and bran from the harvest. Straw became fuel and carried a higher value than straw in the south, because northern winters are much colder. Straw was also used for thatch, matting, rope, bags, and fodder. Bran became livestock feed and fertilizer in both south and north. In the southern provinces (Chŏlla and Kyŏngsang), the owner was responsible for nothing. The tenant at least had to pay the seeding costs and tax, and might have had to pay the tillage costs and irrigation repair. An early nineteenth-century political economist, Chŏng Yag'yong, explains that, in the south, the harvest was taken back to the tenants' houses, where the grain was threshed in their courtyards, and the tenants kept the straw and bran, but in the north, threshing took place in the field. The result was that the northern tenant's work took place under the watchful eyes of the owner, but the southern tenants had complete control over the production from the fields and presented the owner with the agreed rent at the end of the process. Considering that the tenant may have mis-reported the harvest, the tenant was responsible for costs. In our data, we see the owners and tenants in Changhŭng acting in typical southern fashion, probably because the owner-tenant relations were commercial. The result is that we cannot know the costs of production in Changhŭng (seeding, tillage, and irrigation), because all we have are the owner's accounts and not the tenant's accounts. In the case of neighbouring Yŏng'am, we see more cooperative, 'northern-style' relations. In other words, we see that the owner (a village or clan association) generously supplied seed, paid tillage costs and tax, and repaired irrigation works. The tenants still threshed in their own courtyards and kept the straw and bran. We are fortunate that the custom in Yŏng'am was different, because their records reveal itemized costs, and so we are able to calculate the gross and net rents. In the Yŏng'am ledgers, the autumn rent revenue account includes an expected rent just before harvest as well as a field investigation with the tenant's name. The field investigation records the rent presented from a piece of arable land (A), any outstanding rents with the tenant's name (B), any settlements of outstanding rents with the tenant's name (C), and all deferred rents (D). We can calculate the gross rent per *turak* (0.16 acre) by adding up everything, but the real rent was $A + C - (B + D)$. Expenditure accounts in spring time of the same year were composed of rice traded for copper cash, brown rice milled into white polished rice, seed, tax, tillage cost, and irrigation repairs. By subtracting costs from income, we can calculate the net rent per *turak* or per 0.16 acre.

Illustration 4 1784 Rent Ledger



Source: Han'guk Chǒngsin Munhwa Yǒn'guwǒn, ed., *Komunsǒ chipsǒng*, vol. 21 (Collection of documents, vol. 21) (Sǒngnam: Han'guk chǒngsin munhwa yǒn'guwǒn, 1995): 1784 Rent ledger

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