

DEVELOPMENT OF THE MERDIBAN METHOD IN THE ILKHANATE STATE (1251 – 1353 A.D.) AND IT'S TRANSITION TO THE OTTOMAN STATE ACCOUNTANCY *

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RESUMEN

El estudio tiene como objetivo observar las novedades y mejoras del método Merdiban lo largo del tiempo que se benefician de los registros contables del Estado Iljanato y el Estado Otomano. Los resultados muestran que las relaciones políticas entre el Iljanato Estado y el Estado Otomano se puede considerar como el principal factor para la difusión del método Merdiban en el Oriente Medio. Algunas de las características comunes de estos Estados que contribuyeron a la colocación de este método se mencionan en el estudio. Algunas de las características comunes de estos Estados que contribuyeron a la colocación de este método se mencionan en el estudio.

ABSTRACT

The study aims to observe the developments and improvements of the *Merdiban* method over time by benefiting from accounting records of the Ilkhanate State and the Ottoman State. Findings show that the political relations between the Ilkhanate State and the Ottoman State can be considered as the main factor for the spread of the *Merdiban* method in the Middle East. Some of the common features of these states that contributed to the emplacement of this method are mentioned in the study. From an accounting history perspective these common features are factors that helped in the development of the method.

PALABRAS CLAVE:

Estado Iljanato, Estado Otomana, Historia de la Contabilidad.

KEYWORDS:

Ilkhanate State, Ottoman State, Accounting History.

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1. Introduction

The Abbasid State (750-1258 A.D.), the Ilkhanate (Ilkhanid) State (1251-1353 A.D.) and the Ottoman State (1299-1922 A.D.) were the states which had reigned over the larger Middle East territory. Islamic culture was dominant in all three. The populations of these states are actually of different nationalities. The Abbasids were Arabs. The people who established the Ilkhanate State were Mongols. Ottoman State was established by Turks but the population was a diverse amalgamation of nationalities ranging from Slavs to Arabs. Still, geography and culture constitute the first commonality. Even though the founders of the Ilkhanate State were non-Muslim Mongols, the officials in charge of public administration were Arab, Persian and Turkish Muslims. Therefore, it can be said that the administration in all three states was performed by people with a common culture. Consequently, fiscal institutions of these states were similar; taxation was based on same Muslim-religious rules, and the same factors were effective in expenditures (Elitas, et al, 2008, p.562-565).

The political and economic relationships between these three states resulted in the accounting methods passage from one to another. The Mongols who established the Ilkhanate destroyed the Abbasids State in 1258 but inherited many different cultural elements. In the establishment of the Ilkhanate State, Arabs and Turks, who had arrived in Anatolia from Central Asia, had a more advanced civilization than the Mongols. They served as high level public servants. It is possible that Arab statesmen who took part in establishing the new state brought a fiscal structure and accounting system developed through previous experience to Iran along with their methods and structure of public administration. This accounting system is the *Merdiban* method. The method was developed during the Ilkhanate State era and several books were authored that aimed to teach and present the method.

The Ottoman State (1299-1922) constantly expanded westwards during their founding period. Within that period, they paid taxes to the Ilkhanate and during this financial relationship they learned and mastered the *Merdiban* method. The *Merdiban* method was used as a state accounting method in the Middle East until 1880 A.D. (Güvemli, 2007: p.1). For these reasons, it is observed that the Ottoman state organizations, institutions and accountancy were highly influenced from the Ilkhanate State.

Today, the Ilkhanate State was written out of the Turkish chronicles, and their presence could only be studied from Persian sources, which were often neglected because they didn't specifically mention the Ottomans. One exception to the frequent disregard of Persian sources was the discovery that the Ottomans had copies of accounting manuals written in the fourteenth century in Persian by the Ilkhanate scribes. These manuals were hailed as evidence that Ottoman accounting system stood in the long line of governmental accounting systems in the Middle East going back before the Ilkhanate to the Seljuk and Abbasids (Darling, 2008: p.2422).

As can be garnered from these explanations, it is possible that the *Merdiban* method of accounting was employed by many states in the Middle East, but only the Abbasids, Ilkhanate

and Ottoman usage is illustratable through documents. As a result, the invention and the development of the method are only researchable by examining these three states.

This study first examines this lesser known era of this accounting method, the Ilkhanate era and aims to show the transition of the method to the Ottoman accountancy. In order to show the transition more clearly, the study examines the accounting applications of the Ilkhanate State and the Ottoman State in the last sections.

2. Improvements to the Merdiban Method within the Ilkhanate Era

As mentioned previously, following the sacking of Baghdad in 1258 by the Mongol leader of the Ilkhanate State, Hulagu, the Abbasid sovereignty was ended. The Ilkhanate State (1251-1353) was founded in what is today Iran and had much Abbasid influence in its state administration, fiscal and accounting traditions. This Abbasid influence on the Ilkhanate State was a result of employment of many Persian and Arab officials and scholars in the Ilkhanate court in Tehran. Also Turks who were employed in both states probably had a role in this influence.

It should be noted that the Ilkhanate concept of state differs from the Arab concept and originated in the steppes of Central Asia and was brought into the Middle East by Genghis Khan and his sons. But the same cannot be said of the fiscal administration and accounting traditions of the Ilkhanate State. The fiscal administration and accounting style developed in the Middle East prevailed in the Ilkhanate State and resulted in the employment of the *Merdiban* method.

To illustrate the similarity between the Ilkhanate and Abbasid accounting system, a comparison of some accounting ledgers are shown.

Daily Ledger: This ledger was called the *Defter-ul Yevmiye* by the Abbasids and *Ruznamce* by the Ilkhanate. In Arabic, *yevmiye* means day, while in Persian it is *ruz*. *Defter* is the Arabic for ledger while the Persian for the same word is *namçe*. The Abbasids used this ledger to record daily expenses while the Ilkhanate used it similarly to Pacioli's memorial¹.

Defter-i Tevcihat: This was the ledger used during the Abbasid times to record expenditures by type. It was used by the Ilkhanate for the same purpose. The name literally means "Ledger of Orientation".

Defter-i Tahvilat: This ledger was used by the Abbasids to record revenue from the provinces. In the Ilkhanate State this ledger was used not only to record revenues but also to record money sent to provinces or given to specific people. The name literally means "Ledger of Transformation or Conversion".

¹ The Ottomans used the name *ruznamçe* as well, but it was used to denote the ledger where daily revenue and expenditures would be recorded.

Ledgers for Annual Revenue and Expenditures: The Abbasids called this ledger *Hatme* because in Arabic *hatme* means to finish. The Ilkhanate called this Defter-i Cami-ul Hesap (Ledger where accounts are united) (Güvemli, 2000: 306).

There are many more examples. The significance of these ledgers is that they illustrate the similarity between the accounting traditions of both states. It should be mentioned that the Ilkhanate kept more functional and detailed records in line with different government requirements. Especially during the reign of Gazan Khan (1295-1304) fiscal reforms were enacted that increased the necessity for detailed record keeping and the accounting system was further developed in light of this necessity. For example, the accountancy body in the capital was organized according to provinces and each part was overseen by a *katip*. The word *katip* means “the one who writes, or keeps ledgers” and in both Abbasid and Ilkhanate State accountants were referred to as *katip*. In the Ottoman State the accountants were called *katip* for centuries by the laity. But the official title of government accountants in the Ottomans was *halife*, which was a public servant title.

When accounting records of both states are reviewed it is observed that the Ilkhanate further developed the method and hence used a more advanced *Merdiban* method.

The Ilkhanate improved the *Merdiban* method used in the fiscal system and government accounting in the Middle East. These improvements are listed below.

- The central organization for government accounting was organized according to provinces. In this manner revenues and expenditures for each province could be monitored by the central administration and similar ledgers were maintained for each province.
- Revenues and expenditures of the state could be determined through the information recorded in each department of the central accounting organization. These developments can be seen in four different accounting instruction books written between 1309 and 1363 that still survive. It is also clear that the Ilkhanate application of accounting enabled them to analyze revenue and expenditure realizations and plan future revenue and expenditures.
- The records in the accounting ledgers were, by and large, kept in monetary units and records of amounts of goods had decreased. This was made possible by the fact that states revenue and expenditures was undertaken in monetary units as a result of fiscal developments. This in turn simplified account recording system and helped it develop. Records of revenues included information about the individual who was charged with collecting the revenue and information about which document the collection or expenditure was based on. This principle was also a part of the Ottoman State accountancy.
- The principle of writing about the type of record or the reason for the transaction was adopted for revenue and expenditure records. The example presented in Annex 1 show this information recorded at the top of the record item. This information was recorded in the item itself in the Ottoman State.

- In consecutive record items, the statement “added to” or “subtracted from” was added to the latter items to better express the connection between consecutive records. This was an innovation in the method but this was removed in the Ottoman practice and the connection was made through information in the record item.

- In the second part of Annex 1, the total expenditure is written first and the two specific items making up this total are recorded below it in *Merdiban* style. Ottoman accountancy further developed this style into a shorter and more effective one and was able to record items in a smaller space.

- In the example presented in Annex 1, it is observable that records show the authorization of the expenditure as is the case with revenues. In the example, it is stated that the expenditure is made by cabinet decision that is ratified by the head of state.

- In the records, the monetary unit is stated as *Dinar* but the *Dinar* amount is shortened to the rate of 10,000 *Dinars* (a *tümen*) and the records show the amount in both units. The same routine was observed in the Ottoman State, for example while revenue and expenditure was recorded in *akçes*, the records were summarized in *kises* at the rate of 50,000 *akçe* to a *kise*. The Ottoman records were, however, usually kept in one monetary term, usually *akçe* or *gurush* (120 *akçe* per *gurush*) or *kise*. In some instances records included two different monetary units but even then instead of using an entire line in the ledger, as was the case in Ilkhanate accountancy, records were kept in a more compact manner.

- In Ilkhanate accountancy, each item of account records was written in *siyakat* script to make entries more compact. *Siyakat* is a kind of writing and numbering which was used in order to record accounts and documents (Sertoğlu, 1986:65). It is known that the writing part of *siyakat* was called *erkan-ı divaniye* (Otar, 1991:98).

- In the Ilkhanate State, the Persian *siyakat* script was used. The language used in the Ottoman State was Ottoman Turkish, which included many words taken from Arabic and Persian and which was written using the Arabic alphabet. The Ottomans also used *siyakat* script in accountancy. The *siyakat* script was used in these three Middle Eastern states in accountancy and secret correspondence. *Siyakat* script was employed throughout the life of the *Merdiban* method and had an important role in the development of the method.

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3. Transition of the Merdiban Method to the Ottoman State Accountancy

In order to understand the transition of the *Merdiban* method to the Ottoman State, we have to review Ottoman - Ilkhanate relations during the initial phase of the Ottoman State.

3.1. Ottoman – Ilkhanate Relations

The period 1299-1453 is known as the founding period of the Ottoman State. The Ilkhanate State was founded in the 1250's and continued its existence until the second half of the 14th Century. The Mongols, who came to the Middle East from the Central Asian steppes

in the years 1220-1225, initially entered Anatolia and later turned towards Persia and established the Ilkhanate State. The Ilkhanate State continued its existence until the Golden Horde invasion of 1257-1258. But Mongol reign over the region continued for some time after this date. The Golden Horde State was established in a Mongol controlled area by Berke Khan, who also was a descendant of Genghis Khan, with a predominantly Turkic population. Although the Ilkhanate were Mongolian, Persian and Arab cultures were predominant in the state and had connections with Anatolia. Many of the fiefdoms which reigned in Anatolia at the time were vassal to the Ilkhanate and paid tributes. One of these fiefdoms, most of which were of Turkic origin, was the Ottomans (Meydan Larousse, Vol.6, 1971).

The Kayı clan, which was one of the Turkish clans, was settled around Eskisehir, Sogut in western Anatolia. Osman Ghazi (1258-1327), son of Ertuğrul was the leader of the fiefdom until 1324. The missions of these fiefdoms were to protect the western borders and when necessary expand westward. Because of the westward posture of the Ottoman State, it had every inclination to keep its eastern borders secure. Towards this end they had to pay tributes and generally cultivate good relations with the Ilkhanate which was the strongest state to the east and to whom the other fiefdoms in Anatolia paid tributes.

In the first volume of his work titled “Ottoman History” (1975: 111) Ismail Hakki Uzuncarsili explains these political and fiscal relations in this manner.

As a gesture of goodwill towards Emir Coban who was the Ilkhanate representative tasked with establishing relations with fiefdoms in Anatolia, Osman Ghazi named one of his sons Coban.

Uzuncarsili also relates that Osman Ghazi's successor and son Orhan Ghazi had friendly relations with the Ilkhanate governor general in Anatolia - Sheikh Hassan - and his aide Eratna, as indicated in history of İbn-i Kemal (see İbn-i Kemal Tarihi, Nuruosmaniye Kütüphanesi, Varak: 47).

It should be kept in mind that, at the same time, the Seljuk State also reigned in Anatolia.

In his research titled ‘Establishment of the Ottoman State’ which was published in the work “Genel Turk Tarihi” (General Turkish History) edited by Hasan Celal Guzel, Halil İnalçıklı explains the political connection of Osman Ghazi with the Ilkhanate as follows:

Therefore it can be concluded that the following hierarchy was true for Osman. Osman was subject to Emir of Kastamonu (Çobanoğulları), who was subject to Seljuk Sultan, who in turn was subject to Ilkhanate in Iran. Political authority gained legitimacy in this chain of subjugation...

This shows that the Ottoman fiefdom had political ties with the Ilkhanate and therefore may have had fiscal ties too.

After the death of Emir Temürtaş of the Çobanoğlu State, who was responsible for the political connection of the Ottomans with the Ilkhanate as indicated by İnalçıklı, it is understood that the Eratnalı State (1327-1381) served as the link in the ties to the Ilkhanate. In his work titled “Eratnalis”, Dr. Kemal Gode states:

Hamdullah Kazvini recorded the tribute paid by Anatolia to Ilkhanate in 1336 as 3,300,000 Dinars and also listed its distribution according to city. These records are important in that it illustrates Eratnalis' political and economic subjugation to the Ilkhanate and the prevailing economic conditions in Anatolia.

These connections illustrate the Ottoman State's fiscal ties to the Ilkhanate.

In his work titled “Great Turkish History From the Beginning to Our Time”, Yılmaz Öztüna explains the Ilkhanate influence on the Ottomans in the initial years as:

Like his father Orhan Ghazi cultivated good relations with the Ilkhanate and their governor generals in Anatolia, Great Şeyh Hasan and Eratna Lords, and never missed sending his symbolic tribute and had the hutba read in the name of Abbasid Caliph and the Ilkhanate.

This illustrates the existence of a fiscal dependence.

Similarly for the Ilkhanate, economic and fiscal strength increased the importance of state accounting; Ahmet Zeki Velidi Togan's research titled “Economic Condition of Anatolia During Mongol Reign” gives important information about the Ilkhanate State and Anatolia.

As stated in this work, the Ilkhanate used gold and silver coins. The monetary unit was the *Dinar*. Six *Dirhems* made up a *Dinar*. The *Dinar* was used to refer to silver coins. Gold coins were called *Miskal*. One golden *Miskal* equaled four silver *Dinars*. For large sums of money *Tumen* was used as a monetary unit and one *Tumen* equaled 10,000 *Dinars*. These monetary units belonged to Gazan Han's reign (1295-1304). The same research also indicates that in 1294 A.D, paper currency was also used in the Ilkhanate State.

Z. V. Togan indicates that Mongols and Uyghur capital owners living in the Ilkhanate State lent money in return for notes and charged interest that was not high. Togan explains how Mongol reign over Anatolia and Persia increased the economic activity:

Prior to the Mongols, economic anarchy reigned in Persia and Anatolia. There were many different currencies and many different tax laws. The Mongols established a single monetary system, a single tax code, a uniform fiscal system and commercial law ending these differences that inhibited the development of commerce... These

developments caused an increase in commercial activity and economic relations between Eastern States and Byzantine, even European states. According to Heyd's observation the low levels of customs duty also had an effect in the development of commerce. The Genoese even opened a commercial consulate in Tebriz in 1304. During the same period the Memlukes of Egypt were developing commercial ties with Europe. Because of this competition, the Ilkhanate's attempted to further improve trade by sending envoys to Sicilian, French and English courts... Bartold states that as a result of increasing commercial activity between Persia and European countries, the word 'check' used today for credit sales was passed on from Persia to Europe.

Togan places the boundary of Ilkhanate dominance in Anatolia at the Zonguldak, Eskisehir, Afyon and Mersin axis. This shows that Ottoman fiefdom was within the Ilkhanate sphere of influence.

To determine exactly when the Ottoman's fiscal dependence on sovereign states to the east came into being, some political developments have to be reviewed.

The Ottoman State's turn towards Anatolia (the east) began in 1387 during Murad I's reign. First Kastamonu then Karaman was conquered by the Ottomans. By this time the Ilkhanate State had been terminated by Golden Horde and the Ilkhanate territories had been conquered first by the Golden Horde State then by another Turkish commander named Timur. Therefore Ottoman tributes or fiscal relations to any eastern state were, by that time, unnecessary. On the other hand is the fact that, by this time, the Ottoman State had developed the fiscal and accounting systems acquired from the Ilkhanate.

According to information from various sources given above, the Ottoman period of tribute and fiscal dependence to the Ilkhanate lasted for 50 or 60 years (1300-1360).

This can be observed in the Ilkhanate ledger records from the 1350's, presented in Annex 1. In the fiefdom section of Annex 1, Organ Ghazi, Umutbey, Gereade and Bolu was Ottoman territory in the period covered by the records. This document clearly demonstrates that the Ottomans paid tributes to the Ilkhanate State from areas under their rule.

3.2. State Structure and Fiscal Administration of the Ottoman State During the Founding Period

During the founding period of the Ottoman State, which covers the period from 1299 to 1453, many institutions of state were constituted and the principles of fiscal administration were laid down. Developing the fiscal administration of a state also entails the development of an accounting method.

I. H. Uzuncarsili states that the Ottoman State inherited its state structure from the Anatolian Seljuk State and the Ilkhanate State. As generally agreed upon by historians, the most important institution of the central administration of the state was the *Divan* (cabinet of ministers). The *Divan* existed in the top level organization of the Ilkhanate. The *Divan* was

presided over by the Sovereign or his vizier (minister). The viziers of the Ottoman State, as was the case in the Ilkhanate State also, were Islamic scholars. Following Orhan Ghazi's reign newly conquered territories were placed under the administration of commanders of the conquest. Later these territories were made into *Sanjaks*, and *Kadis* (Muslim local judges), to whom the provincial fiscal organization was responsible, were appointed (Uzuncarşılı, 1975: 126).

Throughout the 14th Century, Persia, Syria and Cairo (Egypt) were superior to Anatolia in terms of state structure and culture. Following the conquest of Istanbul, superiority began to shift to the Ottoman State as the learned and wise men of the era started immigrating to the new State. Therefore it is only natural that the Ottoman State was influenced by the Ilkhanate and the Arab states in its initial organization.

During the first half of the 14th Century, the structure and administration of the Ottoman *Divan* was based on the Ilkhanate example. Initially the *Divan* convened every morning under the presidency of the sovereign. These meetings were attended by *Vezir-i Azam* (Grand Vizier or Prime Minister), viziers (ministers) and other high level officials of the state such as *kazasker*, *defterdar* and *nişancı*. *Vezir-i Azam*'s jurisdiction was military affairs, the *kazasker* was charged with judiciary and the *defterdar* was charged with fiscal affairs of the state. *Nişancı* was the secretary of the *Divan* and was charged, in addition, with land holdings of the state, palatial affairs, affairs relating to personal properties of the sovereign, fiefs and agricultural lands. During the founding periods of the Ottoman State, the *Divan* was presided over by the sovereign. After Sultan Mehmed the Conqueror, the *Divan* was presided over by the Grand Vizier, this title later became *Sadrizam*. The vizier who had responsibility for accountancy was a member of this *Divan*.

It was only natural that Ottoman accountancy was modeled after the Ilkhanate State since during most of 14th Century the newly founded state modeled its administrative structure on the Ilkhanate State and the tributary relationship with them.

It should also be stated that wise men of Turkish and Persian culture mediated these relationships and many employees of the Ilkhanate accountancy immigrated into Anatolia and started working in Ottoman accountancy following the fall of the Ilkhanate State.

4. An Accounting Transaction in the Ilkhanate State

It is understood that there were 4 teaching books for accounting in the Ilkhanate State. The last one is called as the *Risale-i Felekiyye Kitab-us Siyakat* written in 1363 (see Solaş Ç and Otar İ, 1994). It was inspired by the previous books but it appeared as the developed form of the other three. The name of this book means 'this is presented as a gift to Felek' who was a statesman. *Kitab-us Siyakat*'s meaning is 'book of Siyakat'. In the pre-Ottoman era the term *siyakat* was also used to refer to the accountancy profession.

ANNEX: 1 (Transcription)
 Record number 17, 18, 19, 20 quoted from Page 93 and 94 in the Risale-i Felekiyye in 1363

<i>Revenues from Iraq</i> _____ <i>17</i> <i>i</i>		
<i>Arabic, prepared onto order based on agreement with Hodja Alaaddin Baghdadi</i>		
<i>2.500.000 Dinar</i>	<i>as tuman (a Persian monetary unit)</i>	<i>250 tuman</i>
<i>Revenues came from places as follows</i>		
<i>Baghdad, Bakuba, Bederay, Numaniye, Bakuseya,</i>		
<i>Kufe, Vasit, Basra, Huveyze, Araba-ı Mehacir</i>		
<i>Şehi _____ t</i>	<i>Şehi _____ t</i>	
<i>from Ali's country:</i>	<i>from Hassan's country:</i>	
<i>Negef</i>	<i>Karbala</i>	
<i>Revenues</i>		
<i>Homeland</i> _____	<i>18</i>	<i>i</i>
<i>Greek (who holds Ottoman citizenship), prepared onto order based on agreement with Hodja Nedjmeddin</i>		
<i>3.000.000 Dinar</i>	<i>as tuman</i>	<i>300 tuman</i>
<i>Revenues came from places as follows.</i>		
<i>Provinces in middle</i> _____	<i>19</i>	
<i>Amid, Meycingerd, Kığı, Sipir, Menderes, Dircan, Trabzon,</i>		
<i>Erzurum, Erzincan, Kemah, Harput, Malatya, Çemişkezek,</i>		
<i>Divriği, Bayburt, Sivas, Niksar, Kayseri, Develi, Tokat,</i>		
<i>Amasya, Merzifon, Osmancık, Ankara, Çankırı, Aksaray,</i>		
<i>Konya, Akşehir, Seferihisar, Karahisar, Karacadağ, Maden,</i>		
<i>Gümüşpazar</i>		
<i>Provinces in borderland</i> _____	<i>20</i>	
<i>Karaman, Hamidoğulları, Denizli, Umurbey, Germiyan,</i>		
<i>Orhan, Gereede, Bolu, Kastamonu, Sinop, Eğridir</i>		
<i>Deduct from revenues</i> _____	<i>deducted</i>	<i>21</i>
<i>Spends for state's requirements deducted from original and extra revenues</i>		
<i>26.041.000 Dinar</i>	<i>as tuman</i>	<i>2.604 Tuman</i>
<i>These amounts spent.</i>		<i>1.000 Dinar</i>

<i>Deduct from revenues</i>	<i>Deduct</i>	<i>22</i>
<i>Spends made by cabinet onto Sultan's order</i>		
<i>Gümüş Dinar</i>		
<i>8.200.000 Dinar</i>	<i>as tuman</i>	<i>820 Tuman</i>
<i>Deduct from extra revenues</i>	<i>Deduct</i>	
<i>17.841.000 Dinar</i>	<i>as tuman</i>	<i>1.784 Tuman</i> <i>1.000 Dinar</i>

The figures from 17 to 22 on the records above are explained below.

Also because this script was used for accounting records over many years by many other Turkish states that preceded the Ottoman State it was thought of as a science and the science of accounting was eventually called “ilm-i siyakat” (literally the science of accounting). In many accounting books, this word was also used to mention accounting. Also the accounting of the revenue office was referred to as state accounting (see Güvemli, 2000). Its writer’s name is Abdullah Püser Muahammae bin Kiya el Mezenderani. This book was written in the Persian language (also known as Farsi). This book is 227 pages and its dimensions are 4.7 x 6.7 inches. The book is in Tehran State Library of Iran and Ayasofya (Hagia Sophia) Library of Turkey.

The book includes eight chapters. *Siyakat* numbers are introduced in the first chapter, and numerical and measurement units are announced in the second chapter, and the numbers are introduced in the third chapter. The importance of the state accounting in *Merdiban* method are explained in the fourth, fifth and sixth chapters. In the eighth chapter, the account books of states are introduced. Abdullah el Mezenderani introduces these seven accounting books about the state accounting in *Risale-i Felekiyye*.

These seven accounting books are listed below.

- 1-Ruznamçe (Daily Account book)
- 2-Evarece Account book (Major Account book)
- 3-Tevcihat Account book (Account book to observe the expenditures)
- 4-Tavliyat Account book (The account book of individuals)
- 5-Müfredat Account book (The account book of incomes and expenditures of provinces)
- 6- Defter-i Camiu-l Hesab (The account book of incomes and expenditures of the state)
- 7-Defter-i Kanun-u Memleket(The account book of tax law)

The book was written by Abdullah Mezanderani in 1363. However, from explanations in the book that data in the records came from 1349 to 1350 A.D. The above mentioned example is about how the Ottomans paid taxes to the Ilkhanate quoted from *Camii-l Hesab*² (see Yıldız and Güvemli, 2011).

It was mentioned that tax collecting places of the Ilkhanate, and taxes collected from these places, are in order in the first twenty articles in the book. Articles from 17 to 20 are about places from Anatolia and Iraq in the above example. Tax amount collected from Iraq and provinces in that place are listed in order on the 17th note marked in the Annex. In the 18th, 19th and 20th notes, provinces which had a portion of them ruled by Anatolian States and the other portion ruled by the Ottomans, are listed in order. Provinces ruled by Anatolian States were taken from Middle Anatolia. The provinces in the middle are noted at the beginning of the record as an explanation. The rest of the provinces are from West Anatolia. The core of the Ottoman State, the Kayi tribe of Oguz Turks, was part of the westward Turkic migrations from Central Asia that began during the 10th Century.

It was understood that records of state expenses were made with the *Merdiban* method in the 21st and 22nd notes marked in the Annex. In the 21st note, all expenses of the state were 26,041,000 *Dinar* in those years. Figures in the books were written with calligraphy. It is usual to encounter figures written with calligraphy in a state accounting system of the Middle East. Briefly, this was a preventive measure. A portion of these expenses were made from actual revenues (8,200,000 *Dinar*) and the other portion was made from extra revenues (17,841,000 *Dinar*). Unchangeable features of the *Merdiban* method were that of writing the grand total at first, and arranging the sub amounts, which made up the grand total, one under the other.

5. An Accounting Transaction in the Ottoman State

To better illustrate the development of the method in the Ottoman State an accounting transaction from 1587-88 A.D. is presented in Annex 2. This record is an accrual item concerning the *jizya* tax. This tax was collected from non-Muslims within the Ottoman State. It was accrued at the beginning of the year and collected in four equal payments, once every three months. This record is dated about 200 years after the Ilkhanate example presented in Annex 1 and it is possible to see the development in the method in this time frame by comparing these two records.

² It was one of the four known instructional books about the *Merdiban* style of accounting which appeared around 770 A.D. in the Abbasid Caliphate and was adapted and developed by the Ilkhanate State and then on to the Ottoman State until the end of the 19th century and used in state accounting practices.

ANNEX: 2 (Transcription)

A Record relating with Jizya tax (head tax collected from non-Muslims) accruals from
 Manastir Province of the Ottomans from 1587 to 1588 A.D.

<i>Recorded by Accountant Mehmet Beg</i>			
Accounting			17
<i>Jizya tax collected from Manastir Province from holy month Ramadan in 1587(Hegira 997) to Saban month in 1588 (Hegira 997), Tax Accounting collected by Ahmed from Galata Forces charged with 10 akce and Haydar from Silahdar Division charged with 28 akce for every day.</i>			
<i>House</i>	<i>Jizya tax</i>	<i>Ranch</i>	<i>Jizya tax</i>
2.714	134.741 Akce (coin)	418	27.223 Akce
<i>Addings in term</i>			
<i>House</i>	<i>Jizya tax</i>	<i>Ranch</i>	<i>Jizya tax</i>
154	6.220 Akce	2	330 Akce
<i>Total</i>			
<i>Taken from house and taken as drinking tax</i>			
<i>House</i>	<i>Jizya tax</i>	<i>Drinking Tax per house</i>	<i>Jizya tax</i>
3.288	168.514 Akce	<i>Ranch</i>	49.320

(Prime Ministry Ottoman Archives. MAD. 2760, Istanbul)

Jizya tax is a head tax collected from non-Muslims in return for defense expenses of the state and omitted from the military. This tax continued to be used until the beginning of the 19th Century. The above record is about *Jizya* tax accrual of the Manastir Province. This record includes the names of two individuals who were charged with tax collection, the accountant's name who made the accrual recording in the accounting books, and the daily wages of these people who were charged with the collection of taxes.

There were 2,714 houses and 418 farms at the beginning of the term in the area. In addition to these figures, 154 houses and two farms were set up in this term. So, the total tax paid is $(2,714+418+154+2) = 3,288$. Tax on houses differs from tax on farms. Furthermore, the drinking tax amount per person is 15 akce and is taken from all of them.

The total amount which was collected from tax payers was counted at the end of the record. So, there were in total: *jizya* taxes of 168,514 *akce* and drinking taxes of 49,320 *akce* in Manastir. This entry is an accrual record and is arranged top-down like stairway. When the

tax was received later in the year, these collections would be recorded in a different book. *Siyakat* writing and figures were used in these records.

6. Findings

For the Ilkhanate, the usage of *siyakat* script in state accounting had become the norm. This is illustrated by the fact that the Ilkhanate book on accounting was called *Kitab-us Siyakat*, i.e. *Book of Siyakat*. It should be noted that the four accountancy training books written during 1309-63 in the Ilkhanate State were written with the *siyakat* script. The use of *siyakat* script in state accountancy of the Ottoman Empire was accepted as a general rule.

A common practice in the accountancy procedures of all Middle Eastern states was the extension of the last letter of the first word in the record from left to right to distinguish separate record items. The Ottoman and Ilkhanate practice was to write notes of explanation on this line. While the Ilkhanate denoted the general meaning of the item by a single word in this space, the Ottoman practice was more liberal about the use of this space. In the accounting record presented in this study, the name of the accountant is entered in the space. Other practices included information such as item numbers and others to make the necessary connection between the daily ledger and main ledger.

Another general rule of the *Merdiban* method is writing the item for the total amount at the top and listing the components that make up the total underneath. The accounting record presented in Annex 2 is about the accrual of the *jizya* tax to be collected in an Ottoman province. The tax to be collected needs to be determined at the beginning of a year and it is collected in installments. In this record, any tax debts from the previous year are brought forward and the new amount to be accrued is determined through information from the previous year. Lastly the two items are added together and the accrual record is created, but the *Merdiban* style is still observed.

It is observed in all applications of the method that records include information about which fiscal period the record belongs to, what type of revenue or expenditure the record is about; when necessary, information about the amount of goods concerned is included in the record. To facilitate currency tracing, amounts are stated in large monetary units, *Dinar*, *Tümen* for the Ilkhanate and *Akçe*, *Guruş* in the Ottomans. Another reason is because of the enormous sums of transactions recorded in state accounting and there is a difficulty to present such large numbers.

Various different ledgers were used in the application of the *Merdiban* method. The Ilkhanate application of the method was the period when the ledger system of the *Merdiban* method was shaped. The ledger system of the method has been mentioned in brief in preceding pages of this study, but it should be stated once more that Ilkhanate had an advanced assortment of ledgers. In the Ottoman experience, as the types and sources of revenue and expenditure increased with the expansion of the State, so the daily ledger and main ledger use became the norm. The daily ledger has always existed in the Ottoman

accountancy and is called by that name. But the name main ledger was not used. The example presented in Annex 2 is a main ledger account. *Jizya* was a type of tax collected in many parts of the State. The record concerns accrual of *Jizya* tax from the Manastir province for 1587-88. This accrual record would be made for every province. These records are in the form of main-ledger accounts. The total for the provinces is the total of the accounts in the main ledger and shows the total for the *Jizya* tax accrued in the State. This account shows the total amount of *Jizya* to be collected throughout the State in a given year at the beginning of that year. Naturally, there is another main ledger concerning realized *Jizya* collections. Accrual main ledgers also provide the information necessary for the state budget. The Ottoman State had a state budget starting in the 16th Century, but the Ottomans did not call this a budget and simply called it an accrual.

The method is named only in the accountancy training books from the Ilkhanate era. The Ottomans did not have accountancy training books. Training was provided in a master-apprentice relationship. This may be the reason why it was not named in the Ottoman State.

The organization of state accountancy in these states is generally similar. This is primarily due to the influence these consecutive states have had on each other's political and fiscal structures. All these states had a *Divan* (cabinet of ministers) and a fiscal structure, and by extension the accountancy organization was presented in this *Divan* by a vizier (minister). The organization of accountancy was somewhat different in each state and different in a state at different time periods, especially in the Ottoman State (1299-1922), so that it reflected the necessities of the time. The Ottomans accepted, as a principle, the division of the country into administrative districts and responsibility for accounting of each province by a *defterdar*. The number of these *defterdars* increased at times to as much as four. But there has always been a *basdefterdar*, or a minister of finance, who had a seat at the *Divan*, or the cabinet.

The *Merdiban* method was used in the Ottoman State for various purposes, especially during the 19th Century. For example, it can be observed that the method was used in administering investment projects during the industrialization attempt of 1840-50 A.D. The method is known to have been used for cost accounting in the construction of prominent buildings in the 16th and 17th centuries and was used for cost accounting in industrial organizations during the second half of the 19th Century.

7. Conclusion

This research shows that the political relations between the Ilkhanate State and the Ottoman State were the main factor for the spread of the *Merdiban* method in the Middle East. Some of the common features of these states that contributed to emplacement of this method, including the political relations, are mentioned in the study. From an accounting history perspective these common features are factors that helped in the development of the method.

Generally speaking the *Merdiban* method was discovered by the Abbasids in an Arab-Islamic cultural setting, consolidated by the Ilkhanate in a Persian-Mongol-Islamic cultural setting and in the Ottoman era it was developed in a Turkish-Islamic cultural setting. The most important indicator of this cultural setting are taxes based on Islamic rules, such as *harac*, *cizya* (*jizya* - head tax collected from non-Muslims), and *öşür* (*ashar or tithe* - a tax on crops), and national cultural elements such as *mukataa* (see Güvemli, *et al*, 2008) as a type of public revenue.

The documents used in this study cover information on a limited time period which can be considered as a limitation. Various historical reports and books about the mentioned time period were benefited from in order to overcome this deficiency.

Future research will need to investigate how well the *Merdiban* method offered solutions to problems of administration and specific commercial activities.

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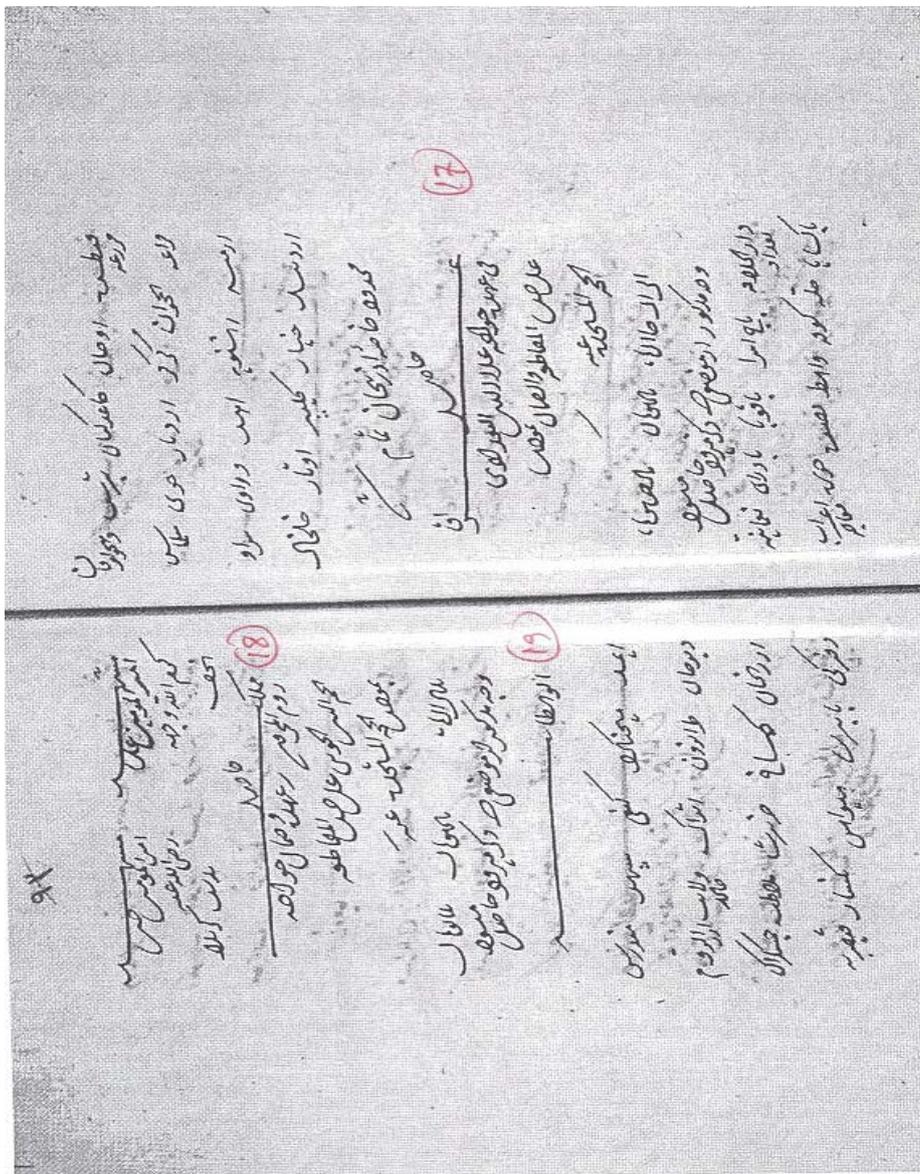
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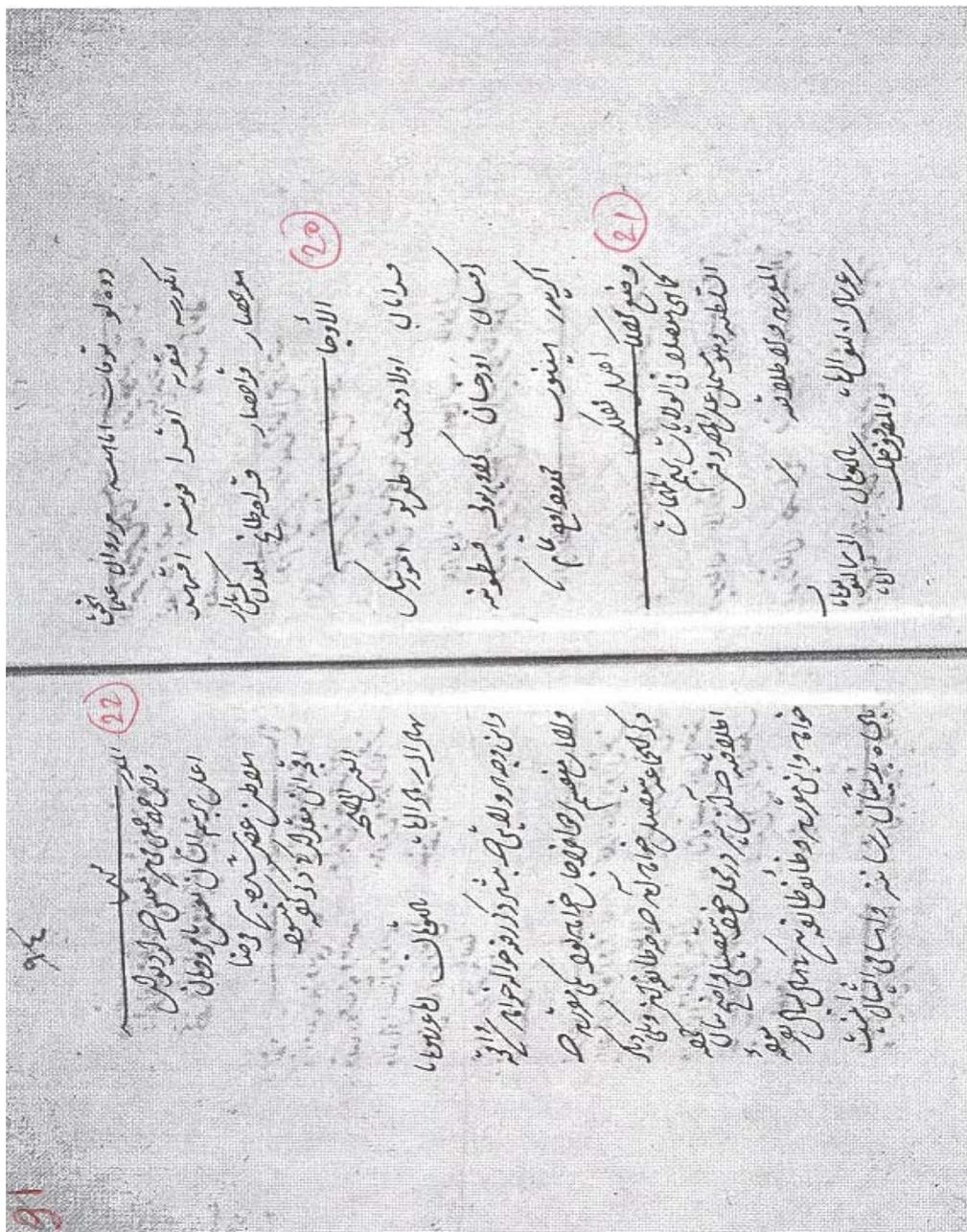
Annex. 1

Risale-i Felekiyye , Page 93-94 (Accounting Teaching book)

Ilkhanate State – Year.1363 A.D.



Annex. 1 (Continuing)



Annex. 2

**A Record related to *Jizya* tax (head tax collected from non-Muslims) accruals from the
Manastir Province of the Ottoman State**

Ottoman State – Year.1587 to 1588 A.D.

