The Market for Afterlife Salvation: On Endogenous Establishment and Abolishment of Purgatory in Christianity and its Effects on the Printing Industry

A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy at George Mason University

By

Zeynab Masoudnia Master of Art George Mason University, 2009 Bachelor of Science Allameh Tabatabaei University, 2004

Director: David M. Levy, Professor The Economics Department

> Summer Semester 2014 George Mason University Fairfax, VA

Copyright: 2014 Zeynab Masoudnia All Rights Reserved

DEDICATION

This dissertation is dedicated to my husband, Dr. Hossein Roufarshbaf, for his love, support and encouragement during these years.

ACKNOWLEDGEMENTS

I would like to give special thanks to my advisor Prof. David M. Levy for his kind support, guidance, and encouragement. I thank Prof. Daniel Houser and Prof. Mark Koyama for serving on my committee and providing support and guidelines. I would like to thank my parents Mansour Masoudnia and Mehri Gharaat and my brother Dr. Yaser Masoudnia for their love, support and encouragement. I thank my friend, Dr. Homa Saleh who made these years memorable.

TABLE OF CONTENTS

	Page
LIST OF TABLES	VI
LIST OF FIGURES	VII
ABSTRACT	VIII
CHAPTER 1: ESTABLISHMENT OF THE DOCTRINE OF PURGATORY IN CHRISTIANITY	′: A
DEMAND SIDE EXPLANATION	1
1.1 Introduction	1
1.2. RELATED WORK	4
1.3. THE TIMING OF PURGATORY AND INDULGENCES	6
1.4. THE SCRIPTURAL BASIS FOR PURGATORY IN CHRISTIANITY	10
1.5. PURGATORY AND SALVATION IN ISLAM	13
1.6. DISCUSSION: RELIGIOUS SYNCRETISM AND THE COMFORT OF PURGATORY	16
1.7. CONCLUSION	25
CHAPTER 2: AN ECONOMIC EXPLANATION OF THE ABOLISHMENT OF PURGATORY	28
2.1 Introduction	28
2.2 RELATED WORK	30
2.3 THE GERMAN REFORMATION	32
2.3.1 MARTIN LUTHER AND THE TRANSLATION REVOLUTION	36
2.4 THE ENGLISH REFORMATION	40
2.4.1 Religious Institutions prior to the English Reformation	40
2.4.2 THE TIME LINE OF THE ENGLISH REFORMATION	43
2.4.3 ABOLISHMENT OF PURGATORY	47
2.5 CONCLUSION	54
CHAPTER 3: Purgatory, Religious Controversy, and the Printing Press.	57
3.1. Introduction	57
3.2. THE PROTESTANT REFORMATION AND THE PRINTING INDUSTRY	59
3.2.1. RELATED WORK	60
3.2.2. THE INVENTION AND USE OF MOVABLE TYPE AROUND THE WORLD	61
3.2.3. THE EFFECTS OF RELIGIOUS CONTROVERSY IN EUROPE	64
3.3. Printing in the Islamic World	76
3.3.1. RELATED WORK	76
3.3.2. HISTORY AND DEMAND FOR PRINTING IN THE ISLAMIC WORLD	79
3.4. CONCLUSION	89
REFERENCES	90

LIST OF TABLES

Table	Page
Table 1: Timing of the Establishment of Purgatory and Indulgences	8
Table 2: Timing of English Reformation and the Abolishment of Purgatory	44
Table 3: Timing of Arabic Printing	81

LIST OF FIGURES

Figure	Page
Figure 1: Timing of Establishment and Abolishment of Purgatory	27
Figure 2: Categories of Books published in Europe 1450-1600	65
Figure 3: Languages of Books published in Europe 1450-1600	66
Figure 4: Places of Books published in Europe 1450-1600	67
Figure 5: Places of Books published in Europe 1450-1600	71
Figure 6: Increase in Book Production and Latin Books in Europe	72
Figure 7: Arabic Bible Printed in 1671	83
Figure 8: Quran printed using movable type by Pagnino and Alessandro Paganini in	
Venice 1537	
Figure 9: English Quran Printed in London 1649.	85

ABSTRACT

THE **FOR** SALVATION: **MARKET** AFTERLIFE ON **ENDOGENOUS** ESTABLISHMENT AND ABOLISHMENT OF PURGATORY IN CHRISTIANITY

AND ITS EFFECTS ON THE PRINTING INDUSTRY

Zeynab Masoudnia, PhD

George Mason University, 2014

Dissertation Director: Dr. David M. Levy

According to the doctrine of purgatory, souls departing life in God's grace who

haven't yet received remission of their sins, will suffer a temporary punishment in

purgatory in order to be purged of sins and ready for heaven. Le Goff (1984), a scholar of

medieval history, states that the doctrine of purgatory was introduced in Christianity by

the Catholic Church in the 12th century. The importance of the doctrine of purgatory is

the fact that it connects this world with the next, and those alive can pray and change the

faith of souls in purgatory. Thus, purgatory is an interesting topic to study because the

religious firm, the Church, can alter the well-being of individuals in both this world and

the next. This research studies the history of endogenous changes in afterlife salvation

and the doctrine of purgatory, along with the economic incentives leading to these

changes.

The first chapter offers a demand side explanation for the establishment of purgatory. Contrary to previous literature (Ekelund et al.1992) that claims the reason for the birth of purgatory was the Church's rent-seeking behavior, I distinguish between the establishment of purgatory and sale of indulgences, and argue that purgatory was a comforting doctrine and in popular demand by believers. The sale of indulgences and other theological background required for indulgences, such as treasury of merit and confession, was introduced to Christianity later, and led to the Church's rent-seeking behavior. Furthermore, the existence of parallel doctrines in other religions such as Islam may have caused religious syncretism between the two religions on the topic.

The second chapter explains the gradual abolishment of purgatory. The abolishment of purgatory is more complex than just competition between the Church and the Protestant Reformation, as argued in previous economics of religion literature. The Reformation movement was initiated with a rejection of the sale of indulgences but it had a more confirming view toward purgatory. I explain that the theological rejection of purgatory happened as a result of exogenous technological shock from the biblical translation revolution. As Martin Luther translated the Bible using the Greek and Hebrew sources for the first time in centuries, he noticed the questionable scriptural sources for the basis of purgatory. The institutional change leading to eventual abolishment of purgatory happened as a result of English Reformation. As England separated from the Church, the state attempted to gain the financial benefits of chantries and monasteries. The confiscation of the Church's institutions for prayer of souls, such as monasteries and

chantries, was only possible if there was no need for such prayer, or in other words, no purgatory.

The third chapter studies the consequences of rejection of indulgences and purgatory on the printing industry. Many economic literatures explain that the printing industry aided the Protestant Reformation; however, they fail to notice the technological changes in printing at the time of the Reformation and the nature of changes in the market for printing. This chapter studies the effects of the Reformation movement on the printing industry and points out that the Reformation's rejection of the sale of indulgences led to a religious controversy and created a dynamic demand for printing. As the Reformation movement demanded high quantity of printing at rapid speed, it helped the new printing technology of movable types to flourish. In the part of the world without similar religious controversy and consequent high demand for printing, such as Islamic countries at the time, the printing industry was not as successful as in Europe at the time of Protestant Reformation.

CHAPTER 1: Establishment of the Doctrine of Purgatory in Christianity: a Demand Side Explanation

Thus for themselves and us good speed imploring Those spirits went beneath a weight like that We sometimes feel in dreams; all, sore beset, But with unequal anguish; wearied all; Round the first circuit; purging as they go (Dante, Divine Comedy, Purgatory CANTO XI)¹

1.1 Introduction

The doctrine of purgatory suggests the existence of a temporary condition or place between this world and the next. In this intermediary status, purgatorial punishments purify souls not guilty enough for eternal torment, and make them ready for heaven. The doctrine was initially introduced to Christianity in the 12th century (Le Goff 1984) and later it was abolished by the Protestant Reformation. Purgatory is an interesting theological doctrine to study using economic methods because it was developed endogenously by religious authorities rather than introduced exogenously in the scripture, and later was abolished by these religious authorities. Studying the evolution of institutions is an important part of understanding the incentives of agents and, consequently, economic growth in a society. This paper explores the endogenous institutional changes in Medieval Europe by studying the birth of purgatory in Christianity and its effect on the Protestant Reformation. The Reformation was a

¹ http://www.gutenberg.org

pivotal chapter in the history of Europe that had enormous social and economic affects and the belief in purgatory and indulgences incentivized the Reformation movement.

There is a limited economics literature studying the doctrine of purgatory. The most prominent work is Ekelund et al. (1992). Extending Le Goff's (1984) argument using an economics of religion framework, Ekelund et al. (1992) claim that the Catholic Church innovated the doctrine of purgatory in order to take advantage of its monopoly power and brand loyalty and to maximize its revenue through price discrimination. In other words, the rent-seeking behavior of the Catholic Church was the main reason behind what Le Goff (1984) refers to as the "birth of purgatory." While the Church abused the doctrine of purgatory through the sale of indulgences, the history of the birth of purgatory is more complex than just the Church's rent-seeking behavior and Ekelund et al. (1992) fail to capture the complete story. This chapter takes a closer look at the history and timing of the introduction of the notion of purgatory and distinguishes between the doctrine of purgatory and the sale of indulgences. Further, it provides an alternative explanation for the process of the establishment of the notion of purgatory than the explanation offered in the existing literature since the rent seeking reasoning for the birth of purgatory is inconsistent with the historical records in Europe and the Middle East.

Le Goff (1984) mentions that there are similar afterlife views on purgatory in other religions such as Hinduism, Judaism, and Zoroastrianism. However, Le Goff (1984), Ekelund et al. (1992, 2002), and other economics of religion literature built on these sources fail to notice parallel purgatorial views in a neighboring religion, Islam.

This research explores the Islamic theological background of the concept of purgatory and shows that purgatory was introduced in Islamic theology centuries before its birth in Christianity, with solid scriptural background in the Quran, contrary to the controversial theoretical basis of this doctrine in Christianity. The theory of the Church's rent-seeking behavior is not applicable to the explanation of purgatory in Islam since the mere existence of an Islamic doctrine of purgatory does not provide a market for the sale of afterlife salvation. With the study of the purgatorial doctrine, it is insightful to extend the economics of religion explanation beyond Christianity only, and to offer a general theory which is applicable to other religions as well.

Studying the literature on the history of the medieval Church and the timing of the birth of purgatory, an alternative explanation for the establishment of doctrine of purgatory can be assigned to what I call "comfort of purgatory." People take comfort in believing that their sins can be forgiven and that they can improve the eternal faith of themselves and their deceased loved ones. Since the idea of hell is unattractive to believers, purgatory and the possibility of redemption is comforting. Therefore, religions competing with other religions with a comforting purgatorial view have an incentive to introduce such doctrines in order to attract customers. In other words, there is a possibility of syncretism between Christianity and other religions such as Islam on this topic.

Section 2 of the paper offers a literature review on the birth of purgatory. Section 3 explores the timing of the development of purgatory and indulgences. Section 4 studies the scriptural basis for the doctrine in Christianity. Section 5 explores the purgatorial

beliefs in Islam and Section 6 discusses in detail the rent seeking and religious syncretism explanation for the birth of purgatory in Christianity.

1.2. On the Thesis of Ekelund et al.

The economics of religion literature assumes that the Church is a profit maximizing firm and people are the customers of the religious firm. Although the profit maximization assumption may not seem to be the objective of a religion, any firm, including religious firms, needs wealth to continue to survive and operate. Several studies model the Church as a profit maximizing firm (Thornton 1992, Ekelund et al. 1989). There are also many studies that examine the rent-seeking behavior of the Catholic Church as a monopolistic firm, including the sale of indulgences (Iannaccone 1991, Schmidtchen and Mayer 1997, Davidson 1995, Allen 1995).

Hull (1989) and Hull and Bold (1994) study changes in afterlife and attribution beliefs in Western Europe in the Middle Ages. They recognize that "afterlife is an endogenous variable" in religion (Hull and Bold 1994, p. 447), and point out that churches use afterlife doctrine in order to enforce appropriate social behavior. The promise of heaven is a pleasant reward that incentivizes believers to act according to religious rules but there is diminishing marginal return for reward in heaven. Hell and the torture and torment that come with it, although vexatious, improve an individual's incentives in the face of diminishing return of heaven. Hull and Bold (1994) conclude that in cultures where a church is an influential part of enforcing social norms and behaviors, afterlife beliefs are strong; conversely, when a state enforces social rules,

afterlife beliefs are less significant. This argument does not, however, explain purgatory as a part of afterlife belief in Christianity in the Middle Ages.

The economic literature on the concept of purgatory is limited to Ekelund et al. (1992 and 2006), who claim that the birth of purgatory was an innovation of the Catholic Church. Ekelund et al. (1992) postulate the innovation of purgatory as a method to increase the Catholic Church's power and revenue by enabling the sale of indulgences. Considering that sins are economic goods that people enjoy, Ekelund et al. (1992) argue that selling indulgences creates a market for this economic good. The existence of forgiveness through purgatory and the ability to pay the price of sins, not only increases the hope for bright afterlife, but also makes religiosity easier. Therefore, selling indulgences increases the Church's membership and its revenue. Additionally, the fact that forgiveness can be obtained before and after death, decreases the risk of being responsible for sins. By adopting the doctrine of purgatory, the Church entered the market for selling indulgences literally for money. Ekelund et al. (1992) argue that the high demand for the forgiveness of sins led to the gradual establishment and acceptance of purgatory.

Finally, Ekelund et al. (1992) mention that the characteristics of the market for salvation gave the Church the power of price discriminates. Brand loyalty of the Church members eliminates the possibility of arbitrage. Confessions provide the Church with information about the customers who essentially reveal their willingness to pay. A long term relationship between the religious organization and its customers reveals information about the customer's income, religiosity and taste. With all the conditions of

price discrimination perfectly in place, the combination of purgatory, indulgences and private confession, the Church engaged in price discrimination by offering a different price for salvation to the customers based on their demand.

Protestants, trying to gain a market share and customers, claimed that God is the only one who gives absolution and the church should stay out of the market for selling it. The Protestant churches tried to compete with the Catholic Church by lowering the price of religious goods and offering a different quality (Ekelund et al. 2002).

I challenge Ekelund et al. (1992, 2002 and 2006) by differentiating between the doctrine of purgatory and indulgences as these doctrines came to life at different times. The next section is devoted to explaining the introduction of all the doctrines that were ultimately used by the Church for the sale of indulgences.

1.3. The Timing of Purgatory and Indulgences

Indulgence was the Church's system to pardon sins of Christians. Indulgences are based on two beliefs: the sacrament of penance, and purgatory (Duggan 2014). The sacrament of penance requires guilt and punishment for the remission of sins. Forgiveness was originally achieved through doing good works in life and suffering in purgatory after death, but the sacrament of penance was altered during the 13th century to include confession and the purchasing indulgences for money. The sacrament of penance and the establishment of purgatory were created at different times in Christianity (Table 1). I will explore in more detail the timing of the emergence of these doctrines and argue that the gap between the adoption of purgatory and indulgences in Christianity casts some

doubts on Ekelund et al.'s (1992) reasoning for the innovation of the doctrine of purgatory.

The doctrine of purgatory started to take form as early as the 11th century as prayer for the souls of deceased became a common practice in Christianity. Le Goff (1984, p. 157) states that the birth of purgatory occurred in the 12th century. However, the market for the sale of afterlife salvation through indulgence happened in the 13th century when the Church took control over the notion of purgatory and claimed that the Pope and priests can pardon sins. The development of the "treasury of merit" concept in the 13th century was the main theological explanation for the Church's power to pardon sins.

According to the treasury of merit notion, the ability of any Christian to merit anything comes from the merit of Christ and the Church. Saints possess extra merits, which give them the power to pardon sins. As Smith (1956, p. 977) states: "It is the Mystical Body of Christ. By his death Christ made it possible for us to gain that supernatural life of sanctifying grace whereby 'we are made partakers of the Divine Nature.' Those who possess this life are united with each other by their common union with Christ from whom they all received it. Thus Christ's merits and satisfaction are shared by faithful Christians through their union with Christ in the Church . . . Thus Christ's atonement being infinite is inexhaustible, and all the sins of the world can be expiated by it. Moreover, the saints have often made satisfaction in excess of what they require to atone for their own sins. This satisfactory value of their acts, not being used for themselves, remains in existence and can be used for others. This is that spiritual treasury

often called the 'Treasury of Merits,' from which can be unceasingly drawn satisfaction for the sins of Christians." Therefore, the indulgence could be granted by Pope or priests.

Development of the 'treasury of merit' in the 13th century was the Church's method of taking control of afterlife salvation and purgatory that ultimately led to the Church to accept a fixed amount of money instead of a meritorious work and suffering in purgatory for the forgiveness of sins. While the theological basis for indulgences developed in the 13th century, the first papal forgiveness happened at the beginning of the 14th century when Pope Boniface VIII forgave the sins of the deceased during the Jubilee celebration (Walls 2012, p. 25). Other than the development of the doctrine of purgatory, it is interesting to note that many scholars considered the 13th century to mark the start of the Church's rent-seeking behavior that led to the Protestant Reformation (Leff 1961, Southern 1970, Walls 2012).

Table 1: Timing of the Establishment of Purgatory and Indulgences²

1024-1033	A monastery at Cluny, France began praying for the dead for the first time. This practice spread quickly.
1170-1180	The birth of purgatory in Notre Dame (purgatory was used as a noun for the first time)
1215	The Fourth Lateran Council made annual confession mandatory
1254	Official "birth certificate of purgatory" when Pope Innocent IV defined purgatory in a letter to the Greek Church

Mid- 13th cen Establishment of "treasury of merit"

² Source: Le Goff (1984)

1274	Second official "birth certificate" as Second Council of Lyons promulgates purgatory
1300	Pope Boniface VIII used the power to forgive the souls in purgatory for the first time as he pardoned the sins of pilgrims who traveled to Rome for the celebration of the Jubilee and those who died on their way to Rome.
1343	Pope Clement VI declared the "treasury of merit" an official

doctrine of the Church

The Church corrupted the doctrine of purgatory through the later development of treasury of merit, sale of indulgences, and the exercise of intercessory prayer for the dead. However, this doesn't mean that the mere reason for the birth of purgatory was solely rent-seeking, especially since the concept of purgatory was established earlier. As Walls (2012, p. 27) points out: "Perhaps it is more accurate to say that it was abuse related to doctrine rather than the doctrine itself that played this pivotal historical role, but the abuses were at the time so closely intertwined with the doctrine itself that it is hard for many to make a distinction. I refer, of course, to the sale of indulgences and the reckless and scandalous manner in which this was commonly done as a means of fundraising for the Church."

This research suggests that the reason for the initial introduction of purgatory and prayer for the dead was a popular demand for such doctrine, because people find solace in the "comfort of purgatory." Belief in purgatory offers hope that there is the possibility of forgiveness after death. Praying for the souls in Hell was not possible and effective, but purgatory was a way to connect the living to the souls of their deceased loved ones. As Greenblatt (2001, p. 17) points out: "Purgatory forged a different kind of link between the living and the dead, or, rather, it enables the dead to be not completely deadnot as utterly gone, finished, complete as those souls resided forever in Hell or Heaven." Since people are emotionally connected to their deceased love ones, the idea that their prayer can help to pardon their sins after life is comforting to them. I will explore the demand side explanation for establishment of purgatory in more detail in section 4.

After the doctrine of purgatory found its place in the Church's doctrine and in the hearts of believers, the Church exploited it with the selling of indulgences. Walls (2012, p. 24) notices that while, initially, purgatory was built on hope and fear, in the 13th century the Church took advantage of the fear aspect of the purgatory. Consequently, believers fearful of punishment in purgatory were willing to pay any price to avoid the torture of purgatory. Indulgence became an important part of the Church and religion starting from the early 14th century until the Reformation (Shaffern 1996, p. 238).

In order to understand the history and reason for the establishment of purgatory, it is important to study the scriptural basis of purgatory in Christianity. The next section is dedicated to taking a closer look at the controversial basis for purgatory in the Bible.

1.4. The Scriptural Basis for Purgatory in Christianity

The scriptural basis for purgatory is very controversial, which is in the same line with the claim of endogeneity of the Church's institution in this case. This section explores in detail the purgatorial references in the Bible and studies what makes them controversial. According to Le Goff (1984), in order to establish a new doctrine, the

Church had to build a theological foundation to support the doctrine in the 12th century. Therefore, this doctrine has a less than convincing scriptural basis.

The main biblical reference to purgatory is a passage from the Maccabees, which refers to a few sinful Jewish soldiers who were killed and Judas Maccabeus orders prayers on their behalf:

"So they all blessed the ways of the Lord, the righteous judge, who reveals the things that are hidden; and they turned to supplication, praying that the sin that had been committed might be wholly blotted out. The noble Judas exhorted the people to keep themselves free from sin, for they had seen with their own eyes what had happened as the result of the sin of those who had fallen. He also took up a collection, man by man, to the amount of two thousand drachmas of silver, and sent it to Jerusalem to provide for a sin-offering. In doing this he acted very well and honourably, taking account of the resurrection. For if he were not expecting that those who had fallen would rise again, it would have been superfluous and foolish to pray for the dead. But if he was looking to the splendid reward that is laid up for those who fall asleep in godliness, it was a holy and pious thought. Therefore he made atonement for the dead, so that they might be delivered from their sin (2 Macc. 12:41-46)."

This passage is the primary and strongest foundation for the doctrine of purgatory. Supporters of the purgatorial view argue that this passage refers to the possibility of being forgiven after death and the effect of people's prayer on forgiveness. This is not a common belief found anywhere else in the Bible. Even many Roman Catholic scholars and believers in purgatory, such as Hayes in "Four Views of Hell" (1996), deny the relation between this passage and purgatory. Hayes argues that there is no textual basis for purgatory and emphasizes that there are traditional reasons for the existence of purgatory. He notes: "the issue of purgatory is clearly an issue of development of

³ New Revised Standard Version of the Bible

doctrine" (p. 109). This view confirms the economics of religion explanation of the creation of the purgatorial doctrine endogenously by the Church. Additionally, Le Goff (1984, p. 45) argues that praying for the dead developed later and was not practiced at the time of Judas Maccabeus, around 170 B.C. It is also important to note that the second book of Maccabees is considered to be canonical and part of the Old Testament according to the Catholic view but Protestants do not consider it canonical. The topic of canonical scripture and the Protestant Reformation will be explored in detail in the second chapter.

Other than the above passage, three texts in the New Testament have been used for building the doctrine of purgatory. All of these passages refer to purgatory indirectly and are open to interpretation. Therefore, the scriptural basis of purgatory is questionable and hasn't been accepted by all Christians. Even the New Catholic Encyclopedia (Cevetello 2003) in its explanation of purgatory admits that purgatory is based on tradition not on the scripture. This is further proof that the introduction of purgatory to Christianity was done endogenously. The main question is the reason behind the innovation of purgatory.

This research studies Islam as a test case for the explanation of the birth of purgatory. While literatures mention the possible effect of other cultures and religions on the purgatorial view in Christianity, they are silent in the case of purgatorial views in Islam. Since Islam was also present at the time of the establishment of the doctrine of purgatory in Europe, and has similar purgatorial views as Christianity, it makes sense to take a closer look at the purgatorial views of Islam and explore the possible effects of

both religions on each other. The next section explores the basis and purgatorial beliefs in Islam.

1.5. Purgatory and Salvation in Islam

Based on the Quran and *Sunnah*⁴ (tradition), Muslims believe that *Barzakh* (purgatory) is a temporary place where souls wait until judgment day. When a soul separates from the body after death, it will be transferred to *Barzakh*. The existence of purgatory (*Barzakh*) has solid scriptural basis in the Quran and the doctrine has been accepted by all major branches of Islam (except the small sects of Motazilite and Kharijite). The belief about the conditions and location of *Barzakh* has evolved over time among Islamic scholars in order to become more comforting but there is no disagreement about its existence from the beginning of Islam (Eklund 1941).

The term Barzakh appears in Quran Surah 23 (المومنون) verse 100:

so that I may do good deeds in the world that I have left behind."

Never! This is just a statement which carries no value, it will be too late because there will be a barrier (Barzakh) between them and the world they have just left till the Day they are raised to life again."

عَلَٰي أَعْمَلُ صَالِحًا فِيمَا تَرَكُتُ ۚ كَلَّا ۚ إِنَّهَا كَلِمَةٌ هُوَ قَالِلُهَا ۖ وَمِنْ وَرَائِهِمْ بَرُزَخٌ إِلَىٰ يَوْمٍ يُبْعَثُونَ

⁴ Collection of deeds and sayings of Munammad, the prophet of Islam

The word *Barzakh* literally means a barrier between two things. This verse describes the regrets of the dead as they ask God to return them to the world but that their request will be denied because there is a barrier between them and the previous world. Although this is the only verse which uses the word "*Barzakh*," Islamic scholars use this word to explain the intermediate state between death and resurrection. Therefore the word "*Barzakh*" has been always used for purgatory or the 3rd place between this world and the next and not in its literal meaning.

There are 15 different verses in the Quran, which give us more information about *Barzakh* and refer to its existence; these verses refer to purgatory by discussing different stages of life, people's feelings after death, self-review of their actions, and feelings of regret. It is clear from these verses that people can talk, feel, and also suffer from punishment after death. Since these verses doesn't offer any detail on time, space and other characteristics of *Barzakh*, the interpretation literature on the topic changed over time.

Eklund (1941) and Smith and Haddad (2002) explain the post-Quranic evolution of the *Barzakh* concept. In detail, Smith and Haddad (2002, pp. 33-52) argue that orthodox Islam mainly focuses on two occurrences after death. The first one is the questioning of a deceased person by the angels who record sins and good deeds (*Munkar* and *Nakir*) about his beliefs and deeds. Sinners who can't answer their questions correctly will be punished starting immediately; people who have accomplished enough good deeds will be able answer the angels' questions when in the grave and will be

immediately or eventually be sent to heaven. The second is the punishment in the grave as the first part of an individual's retribution. Therefore, initially (8th century) the location of *Barzakh* is viewed to be in the grave. The Quran refers to the punishment after death, but doesn't mention the location of the punishment; however, the traditional literature emphasizes that this punishment happens in the grave.

Modern Islamic scholars, ignoring some of the traditional literature or interpreting it, view *Barzakh* as a place and time for purification and preparation (Smith and Haddad 2002, pp. 99-126). "Once the interpretation took hold, *al-barzakh* began to evolve from a boundary line to boundary space" (Halevi 2011, p. 217). Modernists accept that there is some kind of punishment or reward in the grave but they do not share the views of traditionalists. Some even argue that the punishment in the grave is psychological and it is the regret and guilt for one's sins. Muhammad Zafrullah Khan interprets this transitory time as referring to the phase between death and resurrection not the physical place of the grave. Eklund (1941) mentions that both orthodox and modern scholars talk about the same intermediate state after life but offer different details about it. What orthodox Islam calls punishment and reward in the grave is basically what is later called *Barzakh*.

The important point is that the punishment in *Barzakh*, regardless of if *Barzakh* is in the grave or no physical place at all, is purgatorial. Some categories of Muslims will be directly sent to heaven after death and will not stay in an intermediary state between death and resurrection. The first category is the martyrs, who according to the Quran (Surah 3, Verse 169-170) will be welcomed to heaven by angels upon death. Scholars who read every night and Muslims who suffered from illness are others who will directly

enter heaven. Those who will be questioned in the grave and possibly punished are believers who sinned and couldn't achieve absolution; therefore the punishment is purgatorial for them (Halevi 2011, pp. 220-222). The frequency and kinds of punishment depend on each person's actions, good deeds, and sins during his lifetime. A believer can be forgiven after purgatorial punishment and may enter heaven. The interesting point is that not only Barzakh is purgatorial in Islam, hell is also purgatorial. Sinners, who can't achieve absolution until the judgment day, will be sent to hell. All the believers, after being punished for their sins, either in hell or purgatory, will eventually go to heaven.

What exactly happens after the questioning and punishment in the grave until the judgment day is not exactly clear, but the majority of scholars believe that people will wait for the judgment day in a sleep-like condition with the exception of martyrs, who will enter directly into heaven (Surah 3, Verse 169-170). Other scholars, such as Al-Ghazali (11th century), argue that the degree of awareness after purgatorial punishment in the grave depends on the rank of a person.

The main point is that purgatory was a strong part of afterlife beliefs in Islam. There are similarities between the afterlife views of the two religions, such as venial and mortal sins, resurrection, and several more. It is also possible that the two religions have influenced each other's purgatorial views.

1.6. Discussion: Religious Syncretism and the Comfort of Purgatory

According to economic theory, rational people making a decision whether to sin weigh the marginal benefit of a sin with its marginal cost. The Church defines the

marginal cost of a sin as the guilt of and punishment for that sin. Heaven's rewards and punishment of hell was set in a way that marginal cost of a sin is higher than marginal benefit so that believers consequently abstain from sinning. Economists know that people don't always act rationally and sometimes instant gratification takes over. Sins can be explained by choosing instant gratification when the rational choice according to cost analysis for a believer is to follow the religious regulations. Purgatory is a comforting doctrine that allows believers to get remission after instant gratification takes over and they sin. Furthermore, people are emotionally connected to their deceased love ones and it is comforting to know that you can improve their eternal life through prayers. Thus, the purgatorial doctrine gives believers hope for absolution and is comforting.

This chapter rejects the claims that the sole reason for the introduction of purgatory was a supply side reason offered by Ekelund et al. (1992). The Church later abused the doctrine of purgatory through the sale of indulgences in order to increase its wealth, but the initial introduction of purgatory to Christianity could be explained by the demand for purgatory. The demand side explanation of the birth of purgatory is based on the fact that the doctrine is comforting and compatible with human emotions and historical evidences of the gradual birth of purgatory and eventual persistence of this doctrine after the Reformation supports this explanation. Based on the demand explanation for purgatory, the possibility of syncretism among religions on the topic exists as customers demand a comforting doctrine they find in other religions.

Le Goff (1984) showed that the belief in purgatory started with the practice of prayer for the souls of deceased. He offered various stories of the believers who dreamed

that their prayers led to forgiveness of the soul of their love ones. This practice spread fast among the public and in the Church teaching and theology even before the Church officially approved this doctrine. This historical evidence is in line with the popular demand argument. I argue that the popular demand for purgatory was originated as people who were familiar with parallel doctrines in other religions such as Islam found the doctrine of purgatory attractive.

Religious syncretism is defined as when a religion borrows an ideology, practice or any element from another religion. The fact that purgatory has been an uncontroversial aspect of Islam pre-dates the doctrine in Christianity and the influence of Islam in Europe may imply the possibility of syncretism between the two religions. Although at the end of the 11th century Christianity was the dominant religion in Europe and Islam was the dominant religion in the Near East and Africa, both religions extended beyond their own boundaries as they sought religious conquest and conversion (Burns 1971, Sweetman 2002, Southern 1962 and Norman 2009).

The contact and competition between Islam and Christianity may have affected the two religion's doctrines on afterlife as the public and religious scholars were aware of other religions. If this is the case, then the supply side explanation for innovation of the doctrine offered by Ekelund et al. (1992) may not be the correct and only explanation of the "birth of purgatory" in Christianity. There could also be a demand-based motivation for the development of purgatory in Christianity. Customers could have found the purgatorial views of a competing religion, such as Islam, interesting and therefore, the

Catholic Church started to adopt the similar view. I will explore this possibility in more detail in this section.

There are both similarities and differences between the Islamic and Christian concepts of purgatory. The main and most important similarities are the possibility of purification of sins through purgatorial fire, the difficulty element of this purgatorial punishment, and also the effects of prayers for of dead. The two main differences between the two religions include the location of purgatory. Christians don't associate any specific place with purgatory (somewhere between heaven and hell), but traditional Islamic literature (8th century) considers the purgatorial punishment to happen specifically in the grave. This view is less accepted by modern Islamic scholars. The second difference is that the retributive punishment in purgatory does not necessarily lead to salvation in Islam; it depends on a person's sins and God's forgiveness. Although everyone who believes in God will eventually enter heaven in Islam, forgiveness doesn't necessarily happen in purgatory; for a sinner, he may receive his absolution after the restriction day. Christianity has a more hopeful approach to purgatory, where whoever enters purgatory eventually finds his way to heaven.

The fact that there are differences between the two purgatorial concepts in Islam and Christianity doesn't mean that the purgatorial punishment according to Islam didn't act as an inspiration for the adoption of purgatory in Christianity. Halevi (2011, p. 333) argues that: "Christians had not one but many ideas about purgatorial tortures, and these changed over time. Some of these ideas were certainly analogous to Muslim ideas about

life between death and resurrection. The real question is whether the analogous systems were simply parallel or interconnected historically."

Ekelund et al. (1992) didn't consider the possibility of syncretism between the two religions since they seem to be unaware of the purgatory views of Islam. They (p. 11) mention "the absence of purgatory in most Christian religions, as well as from Islam." The reason behind their failure to notice the extensive literature on purgatory in Islam can be traced back to, their main source, Le Goff (1984). In his book, "The Birth of Purgatory," Le Goff (1984, p. 186) argues that "there seems to be nothing in Muslim doctrine that might correspond to Purgatory." Le Goff in the endnote of the chapter (p. 397) adds his sources for this claim: "Regarding Muslim influences, see the somewhat exaggerated claims put forward by M. Asin Palacio in :a Escatologia musulmana en la "Divinia Commedia (Madrid, 1919) and Dante y el Islam (Madrid 1929), as well as more moderate ones of E. Cerulli, Il "libro della Scala" et la questione delle fonti arabospagnole della Divine Comedia (Rome 1949). Concerning the absent Purgatory in Islam see especially "Etude sur l'histoire religieuse de l'Iran," Revue de l'histoire des religions 20, no. 40 (1899), p. 12. See also M. Arkoun, Jl Le Goff, T. Fahd, and M.Rodinson, L'Etrange et le Merveilleux dans l'Islam medieval (Paris, 1978)", pp. 100-101. There is ample evidence in Islamic literature on the existence and importance of Barzakh in Islam that Le Goff (1984) seems to miss. Ekelund et al. (1992) who used Le Goff (1984) as a source also didn't notice the existence of purgatory in Islam.

Halevi (2011, p. 334), studying the Islamic literature on afterlife, argues against this claim: "But, if the Christian special imagination about *purgatorium* did not begin to

develop until the twelfth century, as Le Goff argues, it would be worthwhile to examine the possibility of al-Barzakh acting as a stimulus. The different though obviously related question of Muslim influence on Dante's eschatology was taken up enthusiastically by Miguel Asin Palacios, *La Escatologia musulmana en la "Divina Comedia"* (Madrid, 1919, rev. ed., 1943); and more soberly by E. Cerulli, Il *"libro della Scala" e la questione delle fonti arabo-spagnole della* Divine Commedia (Citta del Vaticano, 1970); and *Nuove ricerche sul Libro della scala e la conoscenza dell" Islam in Occidente* (Citta del Catacano, 1972)."

This religious competition between Christianity and Islam to convert followers goes against the assumption of the Catholic Church as a monopolistic firm. Although free religious competition the same as today's modern societies didn't exist in Medieval Europe, it still is unrealistic to assume the Catholic Church was a monopoly. Christians and Muslim lived side by side in parts of Europe such as Spain, France and England and were aware of each other's ideologies. Islam, the dominant religion in the Near East and Africa, competed with Christianity to extend their followers and boundaries during the Middle Ages.

Historians, such as Burns (1971), Sweetman (2002), Southern (1962), and Norman (2009), study theological effects and perceptions of the two religions to each other. The Crusades (1095-1395), which were a series of military campaigns between the religions, became part of the competition. "The religious and political competition between Christianity and Islam led to the Crusades, which influenced the self-

consciousness of Western Christianity in the Middle Ages and later centuries." In addition to literal war among the religions, intellectual war between the two religions existed in both the Muslim and Christian worlds as missionaries in both religions aggressively tried to convert the followers of the other religions. As an example, Ramon Lull who was a philosopher, logician and theologian in 13th and 14th century, learned Arabic in order to convert Muslims to Christianity. He met the Pope, kings, and priests in different parts of Europe in order to emphasize missionary work and educating future missionaries (Blum 2010).

While it is missing from the economics of religion literature, it is only fair to assume that Islam was present in various parts of Europe in the Middle Ages. A further example of competition among the religions is highlighted in the work of Jean Bodin (1975), classic author on religious tolerance. In his book "Colloquium of the Seven About Secrets of the Sublime," an original manuscript written in 1588, he offers a discussion among religious men from five religions, one of which is Muslim. It is interesting to note that the argument happens in Venice, not Spain where the competition among religions was more intense. He explains "we reached Venice, a port common Venetians delight in receiving stranger hospitality, but also because one can live there with the greatest freedom" (p. 3). Furthermore, the fact that the Quran and Islamic literature were printed in Europe in the 16th and 17th centuries in France and Italy is more proof in the presence of Islamic ideas in all parts of Europe. Thus, it is important to note

 $^{^5 \}underline{http://www.britannica.com/EBchecked/topic/115240/Christianity/67632/Christianity-and-world-religions}$

that even though the Church seemed like a true world monopoly, it still faced some competition from the other religions.

Ekelund et al. (2002, p. 653) ignores the possible influence of the two religions on each other and argue that "The ferment of the "thirteenth-century renaissance" that was stirred by economic changes and by the encounter with Greek philosophy through the mediation of Islam led to a much more complex religious society than that characterized here. Hence, the assumption of a vertically integrated, dominant firm is an analytical device that is not intended to capture the full texture of European history." Contrary to this argument, it is not correct to consider the Catholic Church, even before the Protestant Reformation, a monopoly firm. The Church still had to compete with other religions including Islam, which was present and influential in Europe.

The mere existence of a belief in purgatory didn't lead to rent-seeker in Islam which connects salvation to a person's deeds and God's forgiveness. Although praying for the dead is a common tradition among Muslims, there was no market for the sale of salvation. The tradition of praying for the dead became more common in the 8th century with the development of formal funeral prayer. Muslims ask God to relieve the deceased from the punishment in the grave and to forgive his sins (Halevi 2007, p. 229). Therefore, the Church abused the doctrine of purgatory for its own profit-making later as it developed the theological basis for the sale of indulgences; the inspiration for the establishment of purgatory in Christianity may have come from parallel ideas in Islam. The story of the birth of purgatory is more complex than Ekelund et al. (1992) argue. Lack of rent-seeking behavior in Islam casts more doubt on Ekelund et al. (1992)'s

claims, as a relatively similar religion with similar afterlife beliefs can't be used to explain it.

Furthermore, Ekelund et al. (1992)'s perfect price discriminating explanation of the Catholic Church implies that the abolishment of purgatory was a gain to the believers since the Church extracted all customer's surplus. On the other hand, the demand side explanation of the birth of purgatory means that customers enjoy the "comfort of purgatory" and their customer's surplus is not zero. Believers like to think that the possibility of being forgiven exists even after death. As long as the Church doesn't charge them for salvation, the hope of forgiveness through prayer after death itself is comforting. In this case, abolishment of it isn't pleasant for customers and it is a loss of the customer's surplus.

The historical records show resistance to the death of purgatory which makes Ekelund et al. (1992)'s theory less probable. Against the Reformation's rejection of the sale of indulgences, the doctrine of purgatory persisted strongly until the 19th century (Le Goff 1984, p. 356). There was emotional and popular demand for the notion of purgatory even with all of the Church's abuse of this doctrine. The persistence of the doctrine of purgatory contracts with no consumer's surplus of price discrimination. Kreider (1979) argues that while some Christians were happy about the abolishment of the doctrine of purgatory, others had a negative reaction to it. He explains that this resistance was not logical and scriptural but emotional. Conservatives believed that reformers "were wantonly tempering with the welfare of precious souls" (p. 94). Resistance to the "death of purgatory" documents the "comfort" of belief in purgatory since it provides the soul

with a chance for salvation. Dickens (1989, p. 287) also mentions that on the eve of the Reformation, the public was still committed to the doctrine of purgatory and denouncement of purgatory led to an emotional response at least by some Englishmen.

1.7. Conclusion

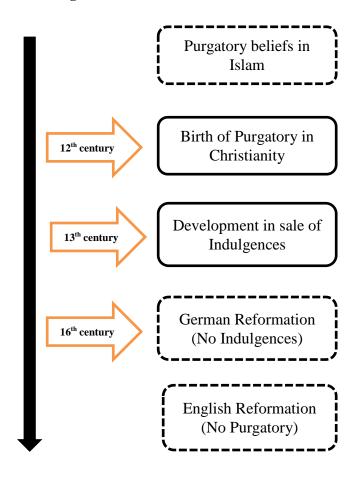
This paper rejects the assumption of the Church as a monopolistic firm and the general theory that the birth of purgatory was motivated by the Church's rent-seeking behavior (Ekelund et al. 1992) and studies the market for sale of salvation and belief in purgatory in a neighbor religion: Islam. It is important to extend economics of religion analysis beyond just an explanation within Christianity. Contrary to Christianity, purgatory or Barzakh existed in Islam from the beginning but the market for the sale of indulgence and afterlife salvation didn't exist. Looking at the history of purgatory in Islam and the competition between the two religions, this chapter offers religious syncretism as an alternative explanation for the birth of purgatory in Christianity. As a result of emotional dependence to the deceased love ones and enjoying the hope of afterlife salvation, there is a comfort of belief in purgatory. Competing religions may offer parallel ideas that are pleasant to their customers in order to attract customers. Therefore, it is possible that there was a syncretism between Islam and Christianity on this topic. Whether the two religions really affected each other is a subject of further study, possibly for historians.

Later, the Church developed its doctrine in order to create a market for the sale of afterlife salvation through indulgences. The mere belief in purgatory did not establish a

market for the sale of salvation in both Islam and Christianity. It is one thing to believe in an intermediary state after death and it is another to believe you can directly or indirectly pay to improve your rank in purgatory. The methods of obtaining forgiveness opened the door for rent-seeking as the Catholic Church started selling indulgences. In the case of Islam, purgatory wasn't a source of income for religious authorities. It is interesting to explore the reason that one religion exploited the market for afterlife salvation and the other one didn't. The institutional differences between the two religions that led to a different approach and use of doctrine of purgatory is a subject of further study.

The next chapter studies the evolution of the doctrine of purgatory at the time of the Protestant Reformation. Denouncement of purgatory and the sale of indulgences, such as with their birth, happened at different times (Figure 1). I explore the reasons that the doctrine of purgatory remained a part of Christianity for a longer period of time compared to indulgence, and why its abolition attracted a more emotional response.

Figure 1: Timing of Establishment and Abolishment of Purgatory



CHAPTER 2: An Economic Explanation of the Abolishment of Purgatory

2.1 Introduction

The previous chapter studies the underlying reason for the "birth of purgatory" in the Roman Catholic Church and it offers a demand side explanation for the establishment of purgatory, given that belief in purgatory is comforting. Furthermore, it shows the existence of purgatory in neighboring religions, such as Islam, and argues that competitive religions had an incentive to introduce a comforting doctrine such as purgatory in order to make their religion attractive to customers.

This chapter continues to study the evolution of purgatory at the time of abolishment of purgatory. Ekelund et al. (2006) argue that the rent-seeking behavior of the monopolistic Church and the extraction of high taxes from wealthy sinners through the invention of purgatory made it easy for the Protestant Reformation to enter the market. While it is a known fact that the Church's abuse of power led to the Reformation movement, this paper studies the reasoning and motivation behind the abolishment of purgatory. The abolition process was lengthy, since the popular and comforting doctrine of purgatory persisted strongly until the 19th century.

This chapter explores the main steps of the abolishment of doctrine of purgatory. I separate the German and English Reformation and show that while Martin Luther's

movement started with criticizing indulgences, it didn't originally reject purgatory. Historical studies show that it wasn't until the English Reformation that the abolishment of purgatory started. Luther in his Ninety-Five Theses targeted only the sale of indulgences. While he mentioned purgatory many times, he didn't reject it. However, he changed his opinion about purgatory later around the time of his Bible translation, as he questioned the credibility of the second book of Maccabees as a result of exogenous technological shock of the Biblical translation revolution.

Martin Luther did not tried to abolish the doctrine of purgatory early in the Reformation movement because of the comforting nature of the doctrine. Furthermore, he did not found the doctrine as a basis of the Church's rent seeking, and a part of the Church's theology that they need to criticize in order to stop the Church's abusive behavior. The earlier literature failed to notice these points. Even when Luther finally rejected the doctrine of purgatory, not all the Reformers agreed on its abolishment and the process of abolishment was slow and emotional for believers (Dickens 1989, Kreider 1979). The Reformation era was an interesting and complex time in Europe and many forces played a role in changing the face of Europe. It is not correct to only look at the Church as a monopolistic firm and Reformers as an entry firm, and ignore many theological scholars, emotional believers in the religion, and political agents.

The second important step in the abolishment of purgatory happened as a result of the English Reformation and can be explained through public choice reasoning. King Henry VIII, trying to exploit his new found power after separation from the Church, noticed the value of the monasteries' land and tried to take control of these properties. The only way that the king's confiscation of monasteries was emotionally possible for believers was if there was no purgatory and thus no need for praying for the dead in the first place. Therefore, the Church of England officially denounced the existence of purgatory.

The second section of this chapter studies the related work in the economics literature on the topic of purgatory and the Reformation. The third section looks at the history of the Reformation movement starting with the German Reformation and explores Martin Luther's opinion on indulgences and purgatory. Section four studies the English Reformation and the reasons that finally caused the abolishment of the doctrine of purgatory.

2.2 Related Work

There is much economics of religion literature studying the cultural, economic and social changes in Europe at the time of the Protestant Reformation. Some of this literature tries to explain the reasons for the Protestant Reformation. Iannaccone (1991) explains that the inefficiencies of religious monopolies make them vulnerable to competitors. Ekelund et al. (2002, 2006) add that the price discrimination practices of the Catholic Church, such as sale of indulgences, led to Protestant entry into the religious market. The Protestants offered a modified product at a lower price. Iyigun (2008)

explains that there were other unsuccessful cases of religious entry attempts into the religious market before the Protestant movement. The influence of the Ottoman Empire in Europe reduced the number of conflicts among European states and ultimately led to success of the Protestant Reformation. Rubin (Forthcoming) shows that the printing press helped the Protestant Reformation as it made it possible and easy to spread the ideas of the Reformers.

Another group of papers studies the aftermath of the Protestant Reformation. Becker and Woessmann (2008, 2009, 2010) show the effects of the Protestant Reformation on economic prosperity and education. Cantoni (2012 and Forthcoming) explains the socioeconomic consequences of the adaptation of Protestantism as the state religion. Finally Johnson and Koyama (2013) examine the institutional consequences of the Reformation on religious tolerance.

This paper explains the underlying reasons for theological changes during the Reformation that made the religious good offered by the Reformation different from what had been offered by the Catholic Church, specifically in the case of afterlife salvation and purgatory. There are a few papers in the economics of religion literature that focus on purgatory and the sale of indulgences by the Catholic Church. Ekelund et al. (1992) argue the Catholic Church used its monopoly power to innovate theological sources that allowed it to price discriminate through the sale of salvation. Such innovations included purgatory, private confession and indulgences. The rent-seeking behavior of the Church gave the Protestant Reformation incentives to enter the religious market and to offer a

lower price for eternal salvation. Davidson (1995) and Schmidtchen and Mayer (1997) explain the vertical integration between the Church and the monasteries and bishops acting as franchisees of the Church.

The economics of religion literature, especially Ekelund et al. (1992, 2002), doesn't separately examine the German and English Reformations and doesn't notice that the "death of purgatory" was mainly the result of the English Reformation. Therefore, the underlying reason for the later abolishment of purgatory was not completely explored. This chapter shows the underlying theological changes and political changes that ultimately led to the death of purgatory. The first chapter mentions the time gap between the birth of purgatory and the sale of indulgences; this chapter shows that there was also a time gap between the death of indulgences and purgatory as the Reformation movement was not initially concerned with the rejection of the purgatorial doctrine and only targeted the sale of indulgences. The next section of the chapter starts with studying the German Reformation.

2.3 The German Reformation

By the beginning of the eleventh century, most Europeans had become Christians and the Church's power was increasing. In the next few centuries, the Church became a monarch (Morris 1989, Renouard [1954] 1970) with a tremendous amount of wealth (Tierney 1964). However, the Church's rent-seeking behavior and its conflicts with various European states led to instability and finally the "decline of the Church"

beginning in the 13th century (Leff 1961). The political instability and the Church's abusive power caused multiple Reformation movements. None of these movements were successful in attracting popular support until the Protestant Reformation started in Germany after the publication of Martin Luther's Ninety-Five Theses.

As discussed in the first chapter, the purgatorial doctrine entered Christianity during the 12th century (Le Goff 1984). Later developments over the next few centuries, such as the treasury of merit and private confession, led the Church to accept a fixed amount of money through the sale of indulgences for the forgiveness of sins. At the time of the Protestant Reformation, everyone was aware of the Catholic Church's rent-seeking behavior (Dickens 1989) and this was the main reason behind the reformation movements. The Lollardy movement, founded by John Wycliffe and started during the 14th century, was the most prominent reformation movement before the German Reformation, although its popularity never came close to the Protestant Reformation. Lollards were also outraged by the Church's rent-seeking behavior and preached against the sale of indulgences. Although some of these movements by the 15th century denounced purgatory, Kreider (1979, p. 94-96) argues that the rejection of purgatory by Lollards was "infrequent" and "insignificant." The "death of purgatory" occurred later as a result of the English Reformation (Marshall 2004). The question is why the abolishment of purgatory became an important part of English Reformation, while previous reformation movements didn't spend much energy on rejecting it.

Luther in 1517 wrote a letter to his bishop, Archbishop Albrecht of Mainz, addressing the issue of indulgences. This letter, which is known as Ninety-Five Theses, was a revolutionary writing that started the Protestant Reformation, targeting the sale of salvation. Bainton (1995, p. 80) points out that the Theses had three main points: "an objection to the avowed object of the expenditure, a denial of the power of the pope over purgatory, and a consideration of the welfare of the sinner." The Ninety-Five Theses didn't reject purgatory; it mentions purgatory as it exists and is real, and only focuses on the denial of the power of the Pope to affect the faith of souls in purgatory. Luther argued that "Papal indulgences do not remove guilt. Beware of those who say that indulgences effect reconciliation with God. The power of the keys cannot make attrition into contrition. He who is contrite has plenary remission of guilt and penalty without indulgences. The pope can remove only those penalties which he himself has imposed on earth" (Luther's Ninety-five Theses, quoted in Bainton 1995, p. 81).

Luther also criticized the treasury of merit and the saints' power of intercession, which were the theological foundation of intercessory prayers and sale of indulgences: "The Saints have no extra credits. Every saint is bound to love God to the utmost. There is no such thing as supererogation. If there were any superfluous credits, they could not be stored up for subsequent use. The Holy Spirit should have used them fully long ago. Christ indeed had merits, but until I am better instructed I deny that there are indulgences. His merits are freely available without the keys of the pope" (Luther's Ninety-five Theses, quoted in Bainton 1995, p. 81).

Therefore, Luther denied the sale of indulgences and the Church's abuse of power through the sale of afterlife salvation. Luther did not need to deny purgatory in order to attack the Catholic Church's abuse of its power. The rejection of the sale of indulgences was a powerful tool in competing with the Church, and eventually forcing it to cease price discrimination and rent extraction. However, Luther did not object to the comforting aspect of purgatory and the possibility of forgiveness in it. There was still possibility for the remission of sins. "Lutherian theology gives penitence just two parts: contrition and faith. A person who is sincerely contrite can by faith claim absolution and know that his sins are forgiven and that he is accepted by God" (Walls 2012, p. 39).

While Luther originally wrote the theses for scholarly reasons and discussion, and didn't expect it to get huge support and reaction, at the end of 1517 and beginning of 1518 his friends translated the theses into German and printed it in large quantities. The Ninety-five Theses spread rapidly in Germany within two weeks, and in the whole of Europe in a few months (Brecht 1985, pp. 204-5) and ultimately led to popular Reformation.

As it is clear from the Theses, Martin Luther personally (at least initially, in the 1520s) believed in purgatory. He mentions: "The existence of a purgatory I have never denied. I still hold that it exists, as I have written and admitted many times (*Unterricht anf etich Artikel*, WA 2, 70), though I have no way of proving it incontrovertibly from Scripture or reason ... I myself have come to the conclusion that there is a purgatory, but I cannot force anybody else to come to the same result" (Luther's Works, Vol. 32:95-96).

Luther's opinion about purgatory did not persist, however, and later he became more resistance to the doctrine. Kreider (1979, p. 93): "Throughout the 1520s, in interviews, letters, and sermons, he gave vent to his mounting impatience with the traditional belief. Finally, in 1530, armed with his most vitriolic pen, he declared war on it in Ein Widderruff vom Fegefeur [A Recantation of Purgatory]. Examining the most commonly cited scriptural texts supporting the existence of purgatory, Luther concluded that they prove purgatory only if twisted and interpreted beyond all semblance of their original meaning. In fact, "there was no purgatory in the old Testament, nor new Testament... It was a later invention... for the profit of covetous churchmen... No bigger lie on the earth."" Even after that, there was no clear fight on purgatory in German Reformation, Luther's focus remained on the Church's abuse of power through praying for the dead and the sale of indulgences (Hillerbrand 2007). The question is what led Luther to change his mind on the doctrine of purgatory and reject it? My answer is that the theological abolishment of purgatory resulted from the exogenous technological shock of the Biblical translation revolution. As Luther tried his own hand in translating the Bible, he discovered a lack of validity of sources on purgatory.

2.3.1 Martin Luther and the Translation Revolution

The Vulgate Latin translation of the Bible, mostly the work of St. Jerome in 400 AD, was in use prior to the Reformation in the Middle Ages due to the inability of most Bible scholars to read Hebrew and Greek. The Catholic Church had control over the

translation and interpretation of the Bible and any changes in the text would require approval by the Church, which was highly reluctant to accept any amendment or changes (Schwartz 1955, p. 45). Before the Reformation, the Bible was mostly printed for churches, monasteries and universities and not for the public. Furthermore, the price was high and most people were not able to read Latin, therefore the Latin Bible had limited customers. It was the Church's idea that "the mysteries of the Bible should be kept from the ordinary people" (Margolis 1917, p. 65). Therefore, almost all the Reformation movements attempted to break the Church's power over the scripture by offering a vernacular edition of the Bible to the public.

Although there was some edition of the vernacular Bible before this time, the 16th century was the era of the biblical translation revolution. The Bible was translated into almost all European languages for the public to read and was made available at a cheaper price using the printing press technology. Consequently, as Reformers marketed the Bible for the first time among public, the Church authority over the Bible decreased. John Wycliffe, an Oxford theologian and founder of the Lollards, was the first person who translated the complete Bible into English (1380-1384). Wycliffe argued that the public should have access to the Bible in a language that they understand. His biblical translation from the Latin Bible, although popular, didn't spread as widely as a result of the lack of printing press and its prohibition by the Church. A total of 150 copies were produced (Bassnett 1980, pp. 46-50). The next step that advanced the revolution of the Bible translation was Luther's translation.

The significance of Luther's German Bible was the fact that it was based on the original version of Hebrew and Greek rather than Latin. He used Erasmus's Greek text for his New Testament and the Soncino edition for his Old Testament. He also used Forben's 1516 Hebrew edition (Greenslade 1963, p. 99). Luther used the help of other scholars especially Nicholas Lyranus since his Hebrew wasn't very strong (Margolis 1917, p. 89). He worked carefully on every passage and revised and corrected his translation many times until his work was complete in 1530, and his first complete edition was published in 1534. Luther's Bible sold well and it was published multiple times, as well as translated into other European languages (Greenslade 1963). Reformers also emphasized the importance of literacy and reading of the Bible by everyone. The printing of the Bible at a lower price and of higher quantity helped reinforce this.

Realization of the importance of going back to original sources and the necessity for biblical scholars to master Hebrew and Greek was an exogenous technology shock that affected Luther's view toward purgatory. As Luther emphasized regarding the importance and authority of the Scripture, it was critical to define the Scripture. He excluded the books and passages that were absent from the original Hebrew from biblical canon (Sheehan 2005, p. 18) and put those passages in the Latin Bible and not in original Hebrew in the Apocryphal category at the end of the Old Testament. He pointed out that the Apocryphal categories are "books not to be esteemed as part of Holy Scripture, but nonetheless profitable and good to read" (Greenslade 1963, p. 100). This is important to my argument as the Second book of Maccabees ended up in the Apocryphal section of

Luther's Bible rather than in the Old Testament, where the Church originally claimed it should be. This means that the main scriptural source of purgatory lost its authority in the opinion of Luther and many other Reformers.

As he translated the Bible, part of Luther's newly found rejection of purgatory was because of his view on the second book of Maccabees, which is the main source of believe in purgatory. He mentions that: "I am so great an enemy of the second book of Maccabees, and to Esther, that I wish they had not come to us at all, for they have too many heathen unnaturalities" (Luther [1566] 1893 Of God's word).

The literature on the Protestant Reformation studies the importance of the printing press on the spread of the Reformation; it fails to notice the importance of the biblical translation revolution. The translation revolution aided the Reformation and also the printing industry, as I discuss in the third chapter. Printing of the vernacular Bible had many cultural and economic effects. The Bible changed from a luxury good to something ordinary people could buy and read. Furthermore, the Bible translation and going to the original Hebrew and Greek sources of the Bible changed Luther's and many Reformer's opinion on purgatory. The notion of purgatory still persisted for a while and had its supporters even among the Reformers because of the complicated nature of the doctrine (Walls 2012) but this was the start of the theological abolishment of purgatory. At this point in the history of the Reformation, there was no real public choice and political reason for the abolishment of purgatory. The public choice reasoning appeared at the time of English Reformation.

2.4 The English Reformation

In order to understand the underlying reasons for the abolishment of the purgatory, it is important to take a closer look at the English Reformation and the leading causes of it. It is commonly known that King Henry VIII's divorce caused his objection to the Church's power that ultimately caused separation of Church of England from the Roman Catholic Church. However, institutional structures before the Reformation (discussed in section 4.1) were very influential in this separation. Section 4.2 offers a timeline for the separation of the Church of England from the Church of Rome. Section 4.3 explains the abolishment of purgatory as a consequence of the English Reformation and King Henry VIII's newly found power.

2.4.1 Religious Institutions prior to the English Reformation

According to Kreider (1979, p. 91), at the time of the English Reformation, a majority of people still believed in purgatory and those who has the economic resources would pay for intercessionary prayers for themselves and family members after death. The purgatorial institutions such as monasteries were also in place to offer prayers to the believers and extract rent for the Church. The Catholic Church included many monasteries and chantries in which believers would give money for one or more priests to perform prayer masses for the benefit of souls in purgatory. Davidson (1995) explains that monasteries were autonomous and enjoyed private property rights. In order to verify their sale of salvation and the quality of their product, they were vertically integrated

within the Catholic Church. The same was true for chantries. A chantry was a property or land which was either in a separate place or part of an existing church dedicated to performing prayer for the souls of the deceased (Dickens 1989, p. 76). Although initially established for praying for the souls, chantries priests offered other religious practices and public services. For example, in many cases they included schools and hospitals. Still, the main purpose of chantries was to give intercessory prayer for the souls of the deceased, and other services came second (Dickens 1989 and Kreider 1979).

The king of England was considered to be the lord of the land, but with regard to chantries and monasteries, it is interesting to note that he didn't have any power over them, since they were controlled by the Church. Needless to say, this arrangement was not agreeable to the king. The history of resistance of the king of England to the establishment of chantries goes back to the 1279 Statute of Mortmain. "Mortmain" in medieval Latin literally means "dead hand." This statute was designed to ban giving lands to the Church and removing the Church's hands from grabbing power and revenue. This act was never really enforced since King Edward I started issuing the "mortmain license" for establishing new chantries. At first, a limited number of licenses were issued after a land survey and estimate of decrease in the King's revenue. However, hundreds of licenses were issued afterwards (Kreider 1979 pp. 71-2). There are records of licenses issued by the state but Kreider (1979, pp. 73-92) argues that these records are not a valid indicator of the real number of chantries because a number of licensed chantries were never actually built. Also, some of the chantries never obtained the required licenses or

used different legal mechanisms to avoid the need for a license. The policies and strict enforcement of the license laws changed over the years until the time of the English Reformation and subsequent abolishment of chantries. On one hand, there is no doubt that the state was unwilling to give the chantries autonomy over their lands; on the other hand, the state didn't want to disobey the Church, which was popularly supported by the public.

The conflict between European states and the Church was not limited to chantries or monasteries and England. There was a constant struggle between the kings in European countries and the Church to obtain more power than the other. Tierney (1964) explains that pre-Reformation the Church and State were two parallel powers and neither could dominate the other and Leff (1961) points out the growing differences between these two powers. King Henry VIII was no exception. He didn't have a positive view of high level of authority of Rome, even before his controversial divorce (Bernard 2005, p26 and Scarisbrick 1997).

The Church and State conflict was major contributing factor to the separation of England from the Church, as the State balances between tax extraction and religious legitimacy. Many economics of religion literature studies the Church and State relationship (Cosgel and Miceli 2009, Barro and McCleary 2005, Johnson and Koyama 2013). However, this research is concerned with the consequences of the separation. In order to expropriate the chantries and their lands, the English state denounced purgatory. Strong belief in purgatory and concern about eternal salvation was the main reason of

existence of chantries even at the time of the Reformation (Kreider 1979, p. 71 and 91). Without purgatory, there was no point in praying for the souls of the deceased and therefore, no need for chantries.

2.4.2 The Time Line of the English Reformation

The long history of conflict between the Church and the king was definitely an important contributing factor in the English Reformation (Dickens 1989, p. 122). However, the English Reformation chiefly came about as a result of King Henry VIII's disagreement with the Catholic Church following his divorce from Catherine of Aragon and his subsequent marriage to Anne Boleyn. The King's personal incentive for divorce ultimately triggered the English Reformation and separation from the Church.

Since Catherine wasn't able to give Henry a living son as an heir Henry VIII lost interest in her and later when he met Anne Boleyn, he decided to get a divorce. Catherine refused to agree to a divorce and Anne Boleyn refused to become the King's mistress. Therefore, the King asked the Church for the divorce. While divorce was not acceptable to the Church, in some cases the Church considered exceptions. The connection of Catherine to the Church made decision making for the Church difficult. As the king become desperate, he became creative in finding a way for both getting a divorce and getting separated from the Church's power. This started a period of conflict between the King and the Church over the topic of divorce as it is shown in table 2.

King Henry VIII searched for an alternative religious excuse to annul his marriage and in the process became an independent power from the Church. The Act of Supremacy of 1531 was the main first step in separation of the English state from the Church. This act made Henry VIII the head of the Church of England and gave him the power to appoint religious posts and to reform, supervise and correct all the spiritual practices and activities. Furthermore, all the taxes formerly paid to the Church would now be paid to the king. The second important step was the 1533 Act of Restraint of Appeals, which denied the Catholic Church the right to appeal decisions made by English courts. In the process of separation from the Church, King Henry VIII finally got his divorce as well.

It is important to note that despite all these conflicts, the king at heart wasn't a supporter of the Reformation. His order to burn Luther's works and his writings against the Reformation, and banning Luther's written material, is proof on the topic. Despite the fact that many Reformers around him tried to convince the king to adopt Reformation, the main change in the king's opinion happened as he separated from the Church and used the theological changes in the Reformation as a way to get the financial benefit from this separation.

Table 2: Timing of English Reformation and the Abolishment of Purgatory⁶

⁶ Source: Bernard 2005, Dickens 1989 and 1966, Kreider 1979, Smith 1962.

- 1509 King Henry VIII became the king and married Catherine of Aragon, widow of his deceased brother.
- Mary, daughter of Henry and Catherine was born. She is their only child to survive. Henry is unwilling to make Mary his heir and around this time he started to lose interest in Catherine.
- 1517 Luther rejected the sale of indulgences.
- 1521 Henry VIII published his book against Luther titled *Assertio Septem Sacramentorum* ("Assertion of the Seven Sacraments") for which he received the title "Defender of the Faith" from the Pope Wolsey, the King's minister, pronounced Luther's excommunication; Luther's books were burned and an order for confiscation of all his writings was issued.
- 1525 William Tyndale's first attempt to print the Bible (New Testament)
- Henry fell in love with Anne Boleyn, who refused to be his mistress. He was convinced that his marriage to Catherine was cursed because he married his brother's wife.

 Public burning of Tyndales's New Testament.
- Henry asked his wife for a divorce and she refused. He asked the Church for an annulment arguing that his marriage should not have been legal in the first place. The Pope postponed decision making on the topic.
- A court including the Pope's ambassador didn't reach a decision on the matter of royal divorce. Henry, who was becoming desperate, sent agents to different universities and scholars in Europe searching for a solution. Fall of Wolsey as Henry's minister as a result of his failure to assist the king with his divorce. King Henry VIII called for a "reformation parliament" meeting. (The parliament would work for 7 years).

 Statute against Pluralism was passed, which forbade the giving of stipends in order for praying for the dead. (Official rejection of sale of indulgences)
- 1530 Henry asked the Parliament for power to become the supreme head of church (separation of power from the church). He appointed Thomas Cromwell as a counselor who pushed for a series of reforms.

 Tyndale published his translation of the New Testament, the first English Bible from the original Hebrew and inspired by and using Luther's German translation of the New Testament.

- 1531 Act of Supremacy was passed making Henry became head of the Church of England and all the taxes formerly paid to the Catholic Church would now be paid to the king of England.
- As Anne Boleyn became pregnant, Henry secretly married her.
 Parliament passed Act of Annates, cutting off annates fee (paid by newly appointed bishops to the Church)
- 1533 The Church of England announced that Henry's marriage to Catherine never existed, while the Catholic Church announced that his marriage was valid. Parliament passes the Act of Restraint of appeals, denying the Catholic Church the right to appeal decisions made by English courts.
- 1534 Publication of Luther's Bible.
- Dissolution of smaller monasteries, with an excuse of war finance needs. Tenth Article was established, which was a series of injunctions addressing the religious practices and clergies' conduct (put together with efforts of Cromwell). The 10th article, named "of purgatory," although a little vague was the first important step in the abolishment of purgatory. It referred to abuse of power of purgatory by the Catholic Church and asked people to pray to God for forgiveness of souls (Kreider 1979, p 122).

Execution of William Tyndale in Belgium before he finished his translation of the Old Testament.

The first complete English Bible done by Miles Coverdale, and dedicated to the King Henry VIII.

- 1539 The Act of Six Articles, which explain the king's approved doctrines and practices in six articles. It remains vague in its explanation of purgatory.
- Publication of the "King's book" which was titled "The Necessary Doctrine and Erudition for any Christian Man." It was a revision of the King's approved practices and doctrine. The book was more in line with the Reformation's views and one of the most important steps in abolishment of purgatory since it officially restrained the Church of England from teaching about purgatory.
- 1545 First Chantries Act gave Henry VIII power over chantries.
- Henry VIII died and the second Chantries Act was passed, which targeted the immediate and complete abolishment of chantries.

The next section explains the gradual abolishment of purgatory portrayed in table 2 and the political incentive behind it.

2.4.3 Abolishment of purgatory

The English Reformation may have been started with Henry VIII's attempt to get a divorce against the Catholic Church's wish. The process was very complex and depended on many factors including financial needs of the state, other conflicts between the king of England and Rome, theological ideas of influential advisors such as Cromwell and Wolsey, and even the Reformation Parliament. Here we focus on the contributing factors to reform in the doctrine of purgatory.

As table 2 illustrates, the abolishment of purgatory didn't happen abruptly since believers didn't like losing the "comfort of purgatory" and were concerned about the forgiveness of souls of deceased. The process started with the preaching by some Reformists about the validity of the doctrine emphasizing that if Pope has the power to forgive people and intercede, why does he keep people in purgatory and not send everyone to heaven. As the uncertainty about the doctrine increased, the preachers were advised not to talk about such controversial topics. This led to a period of uncertainty about the topic between 1528-1543. The king was not sure about the doctrine himself, but at that point, he was not really concerned with it. Some Reformists such as Latimer tried to convince the King to reject the doctrine of purgatory, but didn't succeed, at least not initially (Kreider 1979, p. 120).

Henry managed to gain the ultimate power he sought so desperately mostly in order to divorce Catherine. He became an independent power from Rome after the 1531 Act of Supremacy and 1533 Act of Restraint of Appeals. He cut the Church's hand from decision making regarding him and England through the 1531 Act and through 1533 restrained the Church's power to appeal and overrule his commands. After grabbing ultimate power, his focus changed to financial gains coming from this new gained power. Henry did so though a series of acts which allowed him to collect taxes formerly paid to the Church. With this target in mind, he also decided to end the uncertainty on the doctrine of purgatory.

Even then, the abolishment of purgatory happened in several steps. The first opposition to purgatory was the rejection of the sale of indulgences by passing the Statute against Pluralism in 1529, which banned paying money in exchange for praying for the dead. This was the first step that happened before the separation of the English state from the Church. The 10th Article, 1536, didn't directly reject purgatory either. Rather, it asked people to pray to God for forgiveness but at the same time mentions that the scripture does not provide a location for souls after death and any suffering in that place for that matter. It rejected the belief "that through the Bishop of Rome's pardon, souls might clearly be delivered out of purgatory and all the pains of it; or the masses said at Scala Coeli or other where, in any place or before any image, might likewise deliver them from all this pain and send them straight to heaven" (Smith 1962, p. 370). The Article was still vague and unclear about denouncement of purgatory but still it was significantly different

from the Catholic view of purgatory. At the same time, the state tried to dissolve smaller monasteries but explained the dissolution with financial incentives of war expenditure.

After the 10th article, the king, facing various theological options and advice from Reformists, chose a more conservative route but Kreider (1979, p. 120) states that "the teaching on purgatory and prayer for souls, however, was a notable exception to this trend ... the teaching concerning the souls of the departed continued on its reformist course." The Act of Six Articles, in 1539, was more conservative and believed to be closer to the views of Henry since he even personally attended the parliament to make sure that this act would pass. (Bernard 2005, pp. 497-499). At this point, the king also surrendered to his more conservative advisors, which ultimately caused the fall and execution of Cromwell. It is interesting to note that the Act of Six Articles goes back to more conservative views in all its aspects other than purgatory. This fact clarifies that the main reason for the government interest in the abolishment of doctrine of purgatory was the acquisition of the monasteries and chantries, which was not possible if people were fearful about the faith of their soul. Once the belief in purgatory subsided, acquiring the monasteries led to less emotional problem for believers. We mentioned before the English state's interest in cutting the Church's hands off chantries and monasteries' land and this was the perfect opportunity to do that.

Finally, in 1543, the king's book on the Article of *prayer for souls of departed* officially restrained the Church of England from teaching about purgatory (Kreider 1979, p. 123, Smith 1962, p. 376). It states that the location and condition of souls of the

deceased are unknown. During this period the doctrine of purgatory and prayer for the dead gradually lost its influence but still for some people there was concern with the abolishment of chantries (Dickens 1989, p. 287). In order to avoid an emotional response of believers, even after rejection of purgatory, the initial Chantries Act doesn't mention rejection of purgatory as an underlying reason for the dissolution of chantries but simply states that the dissolution will benefit the state in future wars against European countries. Later, the Chantries Act, after the death of Henry VIII, offered a more Reformist view and rejection of purgatory as the theological reason for the abolishment of chantries (Dickens 1989, p. 285).

Ekelund et al. (2002), explaining the Protestant Reformation, refer to the case of England and mention that "By 1530, the Church of England was ripe for takeover, and in all likelihood, Henry VIII recognized this fact. Further, there is evidence that Henry's confiscations of church property were made with relish. The Reformation came to England for the same basic reason that it came to other parts of Europe: the church's ability to maintain its discriminatory pricing system was being steadily eroded by the dispersion of wealth." This argument doesn't explain the English Reformation completely. As mentioned earlier, despite the Catholic Church's abuse of its monopoly power, people still believed in the Church's teachings and it wasn't until the king of England found a personal and public choice reason for reforms that the English Reformation started.

Reformist scholars existed in England before the English Reformation, but a limited number of people were aware of the works of Luther and others. Dickens (1989, p. 125) argues that the public in England at the time of Reformation were not aware of Reformist theories and ideas mainly because they were not allowed. "Such views arose in the main through practical abuses, quarrels, scandal and conflict of interests. Theory tended to remain in the storehouse until the political situation demanded its production and its use as propaganda." The proof of this argument is that Henry banned Luther's work in England in 1920 (Smith 1962) and they burned Luther's work in England in 1921 (Scarisbrick 1997, p. 111). After his conflict with the Church triggered the English Reformation, Henry finally not only permitted anti-purgatorial publications in 1535, but also allowed distribution of such Reformist books among members of Parliament right before their decision to abolish purgatory (Kreider 1979, p. 117).

The story of the vernacular Bible in England is similar to other Reformer's biblical translations. The first translation based on the original Hebrew and Greek and inspired by Luther was done by William Tyndale starting in 1525 when Luther's New Testament was done. Tyndale didn't get permission to print his Bible in England; subsequently, the published versions were burned in 1526. Therefore, Tyndale chose to go into exile in Germany where he could work on his translation close to Luther and other scholars working on the topic. He managed to print his translation of the Pentateuch in 1530 and the Book of Jonah a year later (Margolis 1917, p. 70). However, he wasn't able to finish his translation before his imprisonment and execution. After the pivotal

time of separation of the English state from the Church, the king's view on the English Bible evolved to become accepting of other Reformation movement material. It is interesting that Miles Coverdale's English Bible in 1535-6 was based on Luther's and Tyndale's Bibles and was dedicated to Henry VIII. This was the first Reformation Bible that spread quickly among the English public (Margolis 1917, pp. 70-1).

As mentioned previously, Henry personally didn't necessarily embrace Reformist views and his ideas in many cases were similar to those of the Catholic Church (Kreider 1979). If it wasn't for political and financial reasons he might not have opened the door for the English Reformation. Henry even tried to restore some Catholic views in the King's book (1543). It was after Henry's death that the Reformist's ideas really found their ways into the Edwardian Reformation more than was possible during King Henry VIII's lifetime (Dickens 1989, p. 287).

While Ekelund et al. (2002)'s explanation for the Protestant Reformation is valid, it underestimates the public choice explanation. This argument becomes more clear and important in the case of England and the abolishment of purgatory. In conclusion, there were two main reasons for the Reformation; the first was to end the dependence of the king on the papacy that benefited directly through extracting taxes from the European states and also controlled and had veto power over them in many cases. Consequently, separation of power from the Church led to an increase in revenue for the king and allowed the state to take control of its faith and financial resources, and ensured the future stream of income. The second reason was for the "grabbing hands" of the state to get an

immediate gain from confiscating lands and properties of chantries. Smith (1962, p. 75) mentions that Cromwell's reasoning for the dissolution of monasteries was not for the spreading of Reformation ideas; it was mainly because of his promise to make the king the richest man on the earth.

Kreider (1979) explains 3 steps in the dissolution of chantries: the first step was anticipatory dissolution as a result of rumors of upcoming confiscation policies based on the past actions of the king. As a result of a fear of confiscation, some chantries relocated themselves to their neighboring churches and some ceased to exist. This led to failure of many financial arrangements in these monasteries and chantries as their priests lost or faced a substantial decline in their sources of income. Those priests who could afford legal fees petitioned the Court of Augmentations for their jobs and income. In other cases clergies in chantries and monasteries tried to extract the resources for themselves before the actual confiscation happened (Kreider 1979, p. 129).

The second step of dissolution was the Henrian Chantries Act (1545) that targeted "for the dissolution of chantries, hospitals, and free chapels" but not intended for total dissolution of all chantries (Bernard 2005, p. 591; Kreider 1979, p. 13) since it placed them in the King's disposal, but didn't do so in practice. Henry was trying to take control over the chantries that faced private dissolution. Therefore, in the absence of restrictive policy to confiscate chantries, some of the chantries still managed to exist in the face of private and state dissolution.

The third and final step was the Edwardian dissolution (1547). Designed after the death of Henry VIII, this step confiscated all chantry properties, colleges, hospitals and chapels in the course of 3 months. The immediate dissolution, which was designed to wipe out the institutional grounds needed for belief in purgatory, was both motivated by financial gain and in line with Protestant theology. This time the dissolution was based on theological grounds of denouncement of purgatory. In order to avoid any negative emotional response from public, before the act was passed, the state published "Certayne Sermons or Homilies" explaining theologies it accepted. It officially denounced purgatory and banned prayer on behalf of the dead (Kreider 1979, p. 186).

The point is that while Luther and other Reformers put the theological basis for abolishment of purgatory in place, it wasn't until after the English Reformation that rejection of the doctrine of purgatory became a large part of Reformation movement. The political and financial incentives of the English state and King Henry VIII led to the ultimate abolishment of the doctrine and confiscation of the institutions based on purgatorial beliefs.

2.5 Conclusion

This chapter studies in detail the abolishment of the doctrine of purgatory and consequent confiscation of institutions of chantries and monasteries during the English Reformation. A major theological shift in a doctrine such as purgatory is rare and interesting to study because it was motivated by strong financial and public choice incentives and it altered the action of all the agents involved such as customers of the

religion and the religious authorities. The abolishment of purgatory, like its establishment, happened gradually and in different steps. Each step of this process was orchestrated with a different incentive, given that the time of Reformation movement was complex with many contributing factors and economics agents.

While the German Reformation rejected the sale of indulgences, it was somehow indifferent regarding the doctrine of purgatory. The German Reformation leaders promised to limit their own ability to extract rent and price discriminate by rejection of sale of indulgences. This meant that the Protestant Reformation committed itself to not extract rent in the future. This commitment device helped the Protestants compete with the Catholic Church by charging a lower price for spiritual services. There was no need to reject purgatory as long as the Pope and the Church didn't have any authority over it. The purgatorial absolution was still a comforting belief and people had emotional dependency on that doctrine. Eventually, an exogenous technological shock resulted from the biblical translation revolution made the first step in theological abolishment of purgatory, as it changed Luther's view on the topic. Even after that, the Reformer's belief in purgatory still remained mixed and it was finally the English Reformation in the 16th century that officially rejected the belief in purgatory.

Although the rent-seeking behavior of the Catholic Church led to the rise of the Protestant Reformation, without the public choice and financial justification, the English state would not necessarily accept these reforms. The public choice reasons for adaptation of the Reformation included the king's separation of power from Rome and

also immediate financial gain from "grabbing" the properties of religious institutions such as chantries and cutting the Church's future source of income. The abolishment of chantries when people still believed in purgatory and were concerned about their faith after death was not possible. Rejection of the purgatorial doctrine allowed the state to confiscate all the properties used for chantries and claimed that these were the properties of the king.

I expand the argument on purgatory and indulgences in the next chapter by exploring the effects of rejection of indulgences and the Reformation on the printing press industry.

CHAPTER 3: Purgatory, Religious Controversy, and the Printing Press

3.1. Introduction

The invention and spread of the printing press most certainly was an eminent factor in changing the face of Europe. There is extensive literature on the economic and social consequences of the spread of the printing press in Europe. While the literature shows an important role of the printing press on the Protestant Reformation movement and economic growth in Europe, my research takes a closer look at the demand for the printing press by focusing on the role of religious controversy in the Protestant Reformation. I argue that religious controversies in Christianity, including the existence of purgatory and the sale of salvation, caused a high demand for the printing press in Europe and ultimately made printing a thriving industry. As the production and number of printed books increased, the cost of book production decreased. Lower costs led to a growth of publications in areas other than religious books, such as academic and other books, as well.

As discussed in the first chapter, purgatory and the sale of indulgences was one of the most controversial topics in Christianity. The sale of indulgences was a great source of income for the Catholic Church, but Martin Luther and the Reformation movement rejected the Church's power to sell afterlife salvation and to change the faith of the deceased in purgatory. The Reformation movement used the power of promoting

religious reform through printing to their benefit by spreading religious propaganda and ideas such as the Church's abuse of purgatorial beliefs. The need for swift transmission of religious propaganda resulted in a large and dynamic demand for the printing press. Gutenberg's invention of movable type in mid-15th century provided a way to answer this demand faster at a lower cost. In order to respond to the increased high demand for printing, the new invention spread across Europe rapidly. While previous literature argues that demand responded strongly to the availability of this new technology, I argue conversely that the high demand for printing and rapid spread of new religious ideas caused the fast adaptation of the movable print technology. It is known in the history and economics literature that the printing press aided the Protestant Reformation, but there may be an endogeneity between the printing press and the Protestant Reformation. It is important to note that the printing industry also benefited from the high printing demand resulting from the Reformation movement. While the Reformation movement helped the printing industry in Europe, the industry failed to flourish in other parts of the world where there was limited religious controversy. Existing data on printed books from the time of the invention of movable printing in Europe until the end of the sixteenth century shows that the Reformation movement resulted in the heaviest demand on the printing industry, as the highest number of books printed during this time was of a religious nature. Martin Luther, the most eminent Reformation figure, published the greatest numbers of books.

The argument that religious controversy helped the rapid advance of the printing industry is a general argument that is applicable to the printing industry in other parts of

the world. The printing industry didn't advance in the Islamic world until the 18th century. Other scholars have offered political and cultural reasons for the late arrival of printing in the Islamic world. For example, Cosgel, Miceli and Rubin (2012) claim that the Ottoman Empire regulated printing heavily in order to save the government's legitimacy. However, I argue that at the same time, there was resistance toward printing in Europe as well. European governments and the Church had restricted and regulated printing. The main difference between the printing industry in the Christian and Islamic worlds was that, contrary to Christianity, the Islamic world did not face controversies such as purgatory and the afterlife. Therefore, there was no real demand for the printing press and its use in spreading ideas and propagandas. Other researchers have sought to explain the reason behind the late arrival of the printing technology in the Islamic world by arguing that the lack of religious controversy in Islam was the main reason for a low demand of religious publications, hence, printing found its way to the Islamic world with some delay.

This chapter includes two main sections. The first section studies the advancement of printing press at the time of the Reformation in Europe. The second section expands the religious controversy argument to Islamic countries by studying the history of books and printing in the Islamic world since the invention of movable type in Europe until the adaptation of printing in the Islamic world in the 18th century.

3.2. The Protestant Reformation and the Printing Industry

In section 3.2.1, I offer a summary of the literature studying the relation between the advent of the printing press, the Protestant Reformation, and economic growth in Europe. I continue the argument in section 3.2.2 by studying the changes in the printing industry caused by Gutenberg's invention of movable type. I conclude in section 3.2.3 with an analysis of the demand for printing caused by religious controversy.

3.2.1. Related Work

The Protestant Reformation is known to have been started with the publication of Martin Luther's "Ninety-five Theses" in 1517. This document targeted the Church's abuse of power especially in terms of the sale of indulgences. The history of the Reformation from this point forward is integrated to a large extent with the history of the printing press. As Eisenstein (1979, p. 306) argues Luther's ideas were nothing new. Theological arguments similar to Luther's ideas were common in the Church and had occurred before Luther's time. These arguments had never left the Church; it was the capabilities of mass printing to spread Luther's ideas among the common people that ultimately led to the Reformation.

The historical literature on the Protestant Reformation is replete with works that note a connection between the Reformation and the printing press. Dickens (1968) emphasizes the importance of printing in the spread of reformation: "Altogether in relation to the spread of religious ideas it seems difficult to exaggerate the significance of the Press, without which a revolution of this magnitude could scarcely have been consummated" (p. 51). He argues that the reason behind the success of Luther's

movement compared to previous attempts at reformation was the fact that Luther benefited from the printing press. Others, such as Gilmont (1998), Hillerbrand (1968), Holborn (1994), and Rupp (1951); also draw a direct connection between printing and the Protestant Reformation in the 16th century.

Recently, there has been a new found interest in economics literature on the social, cultural and economic consequences of printing and reformation in Europe. Becker and Wößmann (2008, 2009, 2010) discuss the positive effects of the Reformation on literacy and, consequently, economic reformation in Europe. Baten and Van Zanden (2008) draw the same conclusion using book production per capita as an indicator for literacy in pre-industrial revolution Europe. Buringh and Van Zanden (2009) show the increasing trend in book production and literacy and consequent economic growth in the course of thirteenth centuries. Dittmar (2010) implements city-level data and illustrates that places that adopted the printing press had higher levels of economic growth. Rubin (forthcoming) uses city-level data and shows that cities that adopted the printing press were more likely to be predominantly Protestant later. Therefore, the economic literature established that the printing industry helped the Protestant Reformation, as well as literacy and economic growth.

3.2.2. The Invention and Use of Movable Type around the World

In order to understand the printing industry, it is important to know what Gutenberg's invention was, how it changed the printing industry, and how it affected the spread of the Protestant Reformation. The technology for printing using woodblocks had

existed for centuries prior to the Reformation and Gutenberg's invention. What is referred to in economics literature as an invention of the printing press was actually Gutenberg's discovery of movable type in the mid- fifteenth century in Europe. With woodblock printing, pictures and texts were cut into the blocks of wood which made multiple printing possible. It is important to distinguish between the two technologies and to note that woodblock printing was customary before the invention of movable type; this newer technology offered the possibility of the speedy printing of thousands of books and at a lower cost. By ignoring the printing history before Gutenberg's invention of movable type, as was done with most previous economics literature, we can't really understand the impact of the printing industry's evolution and the changes in supply and demand for printing. Notably, only Buringh and Van Zanden (2009) mention the invention of movable type and notice that it inflated the rate of growth in book production in Europe by reducing the cost of printing. They focus on the social, cultural, and economic consequences of book production. My research takes a more detailed look at the printing industry itself and explains the evolution of the printing industry and how the Protestant Reformation helped this industry to flourish.

Interestingly, woodblock printing technology was in use around the world, both in the East and in Europe. Before the invention of movable type, printing in Europe was mostly under the control of the Church. Buringh and Van Zanden (2009) argue that the increasing power of the Church and the monastic movement between 900-1300 increased the book production in Europe. The most popular book in Europe was the Bible. Most of the printed books were of a religious nature (Eisenstein 1979) and most of the demand for

printing came from the Church (Holborn 1994). At the same time, the book production in the East, especially China, Japan, and Korea, was high and comparable with Europe. Before the advent of movable print, the Chinese were using woodblock methods for printing works of popular poets, history, encyclopedias, paper money, and even playing cards. Again, the most important printed works in all Eastern countries were religious books: Buddhist literature (Gunaratne 2001).

Contrary to popular knowledge, Johannes Gutenberg was not the original inventor of movable type. Scholars such as Vainker (1990) and Gunaratne (2001), studying the printing history of the East, argue that movable print was invented in China in the mid-11th century, centuries before Gutenberg. Although in use, movable type did not become popular and woodblock printing was still the main technology in use in Eastern countries. The question is why the new technology of movable type failed to catch up with the old woodblock technology.

I argue that lack of real demand for printing was the reason that there was no need for the new technology to compensate the initial costs and difficulties of establishing the new technology. Other researchers such as Tsien (1985, p. 220) point to the impracticality of putting over 80,000 Chinese symbols in a movable printer. However, Chu (1998, p. 133) rejects this reason and claims that the rich meaning of Chinese ideographic characters can save space in movable printers. Although difficulties in using movable print may be part of the reason that the new technology didn't advance in the East, there is evidence of lack of demand to motivate print shops to use movable print. Without profit motivation, China continued to produce

low numbers of books (Tsien 1985, p. 285) using woodblock technology. Contrary to Europe, as a result of a lack of religious controversy and related propaganda, the printing industry in China didn't target the public by mass production of books. There was no real demand for high volume and speedy printing, and therefore no real need for movable type.

Tsien (1985) discusses the possibility that Gutenberg didn't invent movable type independently but, like woodblock printing, the new technology was taken from China. Whether this claim is correct or not is for historians to answer. For our analysis, it is not important that Gutenberg was aware of Chinese invention of movable print; the point is that the technology existed both in Europe and in the East, and it had spread rapidly in Europe while it failed to advance in the East. This research explains the reasons behind this phenomenon by providing a general theory for the flourishing of the printing industry and mass printing.

3.2.3. The Effects of Religious Controversy in Europe

It is important to take a closer look at the books printed in Europe on the eve of the Reformation and advent of the printing press in order to understand the nature of the demand for books at this time. Figure 2 uses the 2014 USTC (Universal Short Catalogue Hosted by the University of St Andrews)⁷ records of all the books published between Gutenberg's invention of the printing press until 1600. The number of religious books printed during this period is immensely higher than other categories of books.

-

http://ustc.ac.uk/index.php

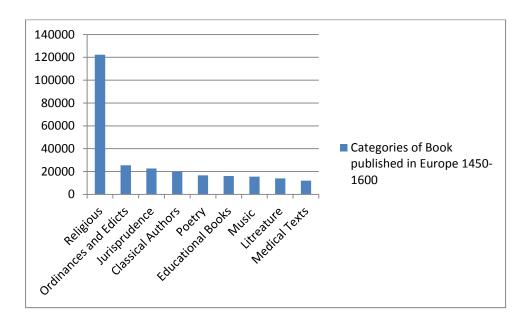


Figure 2: Categories of Books published in Europe 1450-1600

This data shows the importance of religious books as the dominant demand for the printing industry. It is interesting to note that the most-published author in this period was Martin Luther, with 4,790 books of the total of 364,105 books published. Other controversial religious authors such as Desiderius Erasmus were also at the top of most-published authors.

Figure 3 illustrates that most books printed at this period were written in Latin, which was used in the writing of religious and scholarly material. Other than Latin, some books were printed in the languages of the Reformist countries. Figure 4 shows that the

market for books in the Reformist countries and in countries with lower print restrictions, such as France and Italy, was higher than in other parts of Europe.

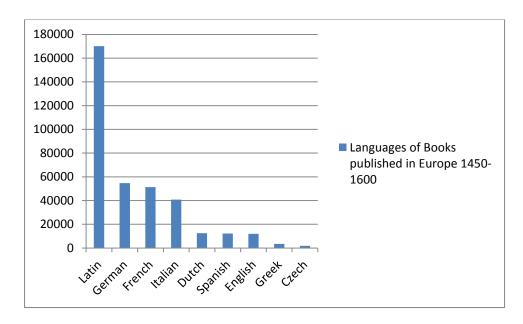


Figure 3: Languages of Books published in Europe 1450-1600

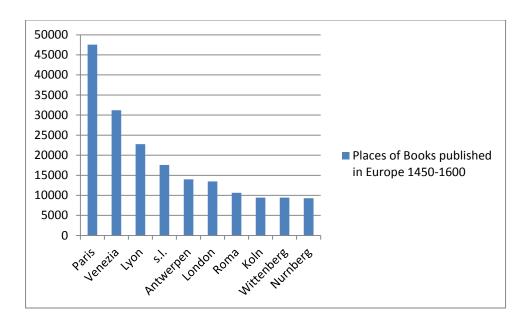


Figure 4: Places of Books published in Europe 1450-1600

Since the chief demand for books at the time of the invention of the printing press was for religious books, it makes sense to take a closer look at the effect of demand for religious literature on the printing industry. I start with studying Gutenberg's first print shop and his attempts to market movable type printing capabilities, and continue with historical evidence of the demand by the Reformists for spreading propaganda to further the aims of the Reformation.

Gutenberg spent years experimenting with printing and also trying, not so successfully in most cases, to make money. In 1448, he moved to Mainz, borrowed some money and started his print shop, which used movable type technology for the first time in Europe (BL online)⁸. The mid-fifteenth century invention of movable type revolutionized the printing industry in Europe as the technology of book production

⁸ http://www.bl.uk/treasures/gutenberg/indulgences.html

changed from "script to print" (Eisenstein 1979). Instead of books produced at the copyist's desk, the print shop began to appear across Europe and offered lower cost, organized, and rapid printing of material than had been possible with woodblock technology.

As I mentioned earlier, the economics literature didn't fully note the importance of the invention of movable type; it also failed to notice the time gap between the invention of movable type in the mid-15th century and the start of the Reformation in 1517. Interestingly, as he continued to try to market the new technology, the printed material chiefly produced by Gutenberg's print shops was still mostly religious material. Still, the main force that helped the new technology to flourish during this period was spreading propaganda, surprisingly not by the Reformists.

After the invention of movable type until the Reformation, the Church was still the primary customer of printing needs. Interestingly, as early as 1452 (BL online), one of the first printing products of Gutenberg's print shop was indulgences (Eisenstein 1979, p. 375). Faster printing of indulgences using movable types meant a higher level of income for the Church; for Gutenberg's print shop, it guaranteed money from the Church at the stage at which the new technology was developing. Other than indulgences, the Church demanded printing of its usual liturgical material such as prayers, rituals, etc. (Holborn 1994). Movable type helped the Church to print its material faster and more cheaply but the demand for printing was not dramatically increased until the Church found a way to use printing for its own propaganda uses. The Church, not the Protestant Reformation, organized the first movement that benefited from the power of this new

printing technology through the rapid spread of propaganda in its "anti-Turkish crusade" (Eisenstein 1979, p. 303). At this stage up until the Reformation, the Church – which later banned and regulated the use of new movable type technology – was enjoying the benefits of the printing press and even called it a "gift from God". But, it didn't take long for the Church to realize the potential threat that the printing press imposed to its power.

In an attempt to extend the market for printing beyond the Church, Gutenberg tried printing other publications such as Donatus's Latin Grammar book and, most importantly, the Bible. Before the invention of movable print and the coming of the Reformation, the Bible usually was printed in Latin, a "dead" language (Stone 1969, p. 77) that was not widely in use among the general public. Bibles were printed for churches, monasteries, and scholarly use, but not for the masses. Gutenberg's Bible was one of the first attempts to market the Bible among a larger, less well educated audience; however, it wasn't any different from previously printed Bibles other than its slightly cheaper price. Gutenberg's Bible, an edition of the Vulgate in Latin, was cheaper in price than Bibles printed before movable type but was still too expensive for most people to afford; hence, the main customers of Gutenberg's Bible continued to be churches, monasteries, and universities (Kapr 1996). Therefore, Gutenberg's attempt to market the Bible among the general public wasn't successful. The Reformation leaders later tried to establish Bible reading among the public by focusing on printing the Bible in the vernacular. The Bible was printed in various languages spoken by the layman in order to make it readable to the public. Consequently, the Bible changed from a luxury good used only by the educated and wealthy and in the Church to something that ordinary people could read in their homes. This made the Bible a best seller and print shops made a lot of money printing and selling Bibles. As Holborn (1994) observes: "By attracting a great new group of customers Luther caused a fundamental change in the primary purpose of printing. For mass sale, quality had to be sacrificed to quantity. Printing changed from an art satisfying in itself to a vehicle to convey ideas and material" (Holborn 1994, p. 126).

I discussed the Translation Revolution in more detail in the "Abolishment of Purgatory" chapter. The salient point here is that the Reformation movement changed the demand and use of the Bible among the general public. While the movement increased reading of the Bible, it created a new market for the print shop.

Even though the Church was using the printing technology to its benefit, there is no doubt that no movement benefited from the printing press as much as the Reformation. It is important to emphasize that the printing industry enjoyed the benefits of publishing propaganda and literature connected with Protestant movements as well.

Figures 5 and 6 look at the book production data between the advent of moveable type until 1600, illustrating the increase in book production as the printing industry advanced and the ideals of the Reformation spread among society. Looking at these figures, we can see how the Reformation changed the printing industry. The first bar in Figure 5 shows the printing done before the start of the Reformation as Luther's Ninety-five Theses in 1517. It is needless to say that after the Reformation, the number of books printed more than doubled and most of the books printed were still religious-themed books. As more print shops were established and the cost of printing decreased, the percentage of religious books relative to the total number of books decreased slightly.

Other types of books found their market and were printed at low cost, but religious goods continued to be the number one category of printed books.

Another interesting trend, illustrated in Figure 6, is the increase in the number of published books in Latin. The number of books printed in Latin also decreased relatively as printed books were targeted to a public who couldn't necessarily understand Latin. Latin was still mainly used for religious materials but other languages also found their way into publication. The ratio of books printed in Latin to total books printed changes dramatically before and after the Reformation. This shows that the Reformation leaders attempted to target their written material toward the public.

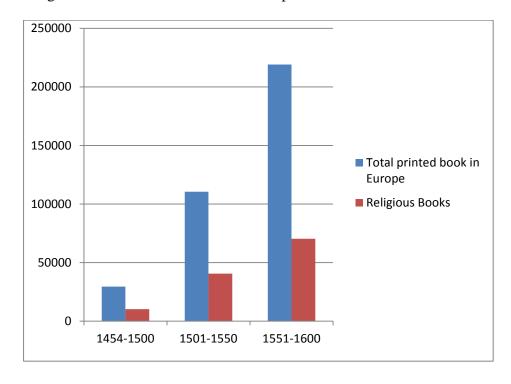


Figure 5: Places of Books published in Europe 1450-1600

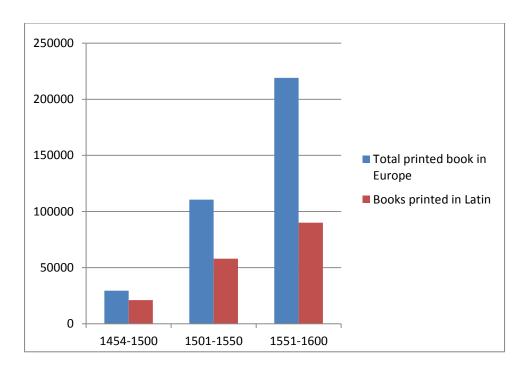


Figure 6: Increase in Book Production and Latin Books in Europe

The Reformist attempts to reshape the demand for books by targeting the public and laymen are in line with my argument that the spread of propaganda and religious controversies helped the printing industry. In order to exploit the printing industry capabilities, the Reformists promoted literacy and Bible study. They went door to door selling their writings at an inexpensive price and even offering their writings for free to people to read (Eisenstein 1979, p. 303). Only movable print can answer satisfactorily such a high demand; also, as a result of the controversial nature of their writings, speedy printing was an advantage of this technology. Hillerbrand (1968, p. xxv) points out that the reformer's writings were short, easy to read and cheap and, most importantly, written in the vernacular. Reformers were intentionally using the new invention to their benefit

and they mentioned the significance of printing in their writings (Hillerbrand 1968, pp. xxiv-xxv). "Luther, himself, described printing as 'God's highest and extremist act of grace, whereby the business of the Gospel is driven forward" (Eisenstein 1979, p. 304). Reformers such as Luther, who was trying to attract supporters, didn't mind the reprinting of their writings.

The Reformation was successful in attracting the attention of the public and encouraging popular support as the movement spread from one country to another across Europe. At the same time, the number of print shops in Europe increased and, based on the new demand, printing became a flourishing business. Print shops trying to make a profit found Reformation-related writings to be the bestsellers to the point that Catholics writers couldn't easily find printers who were willing to publish their material (Holborn 1994, p. 133).

Given the Church's protest and the ban of Luther's writing, most of the books printed after this time are Luther's writing and Reformation-related material (Holborn 1994). It is interesting to note that printers preferred to print Protestant material over all other because they found it more profitable, and the high demand revolutionized the industry. As the movement grew and the market was replete with the Reformation ideas and literature, less-famous reformers such as Bucer, Schwenckfeld, Oecolampadius, Brenz, Melanchthon, and Carlstadt, were also successful in getting their writing published by printing shops since there was popular demand for all Reformation ideas (Hillerbrand 1968, p. xxv).

Kingdon (1964, p. 24) is the only one that noticed how Christianity affected the printing industry and he claims the impact was mainly because of the reliance of Christianity on scripture. He compared Christianity with Islam in this respect and argued that printing found its way to Islam later because the Quran was mostly taught orally and there was less reliance on written scripture. While Kingdon correctly linked Christianity with the advancement of printing industry, he failed to notice that the main reason for printing was an element of controversy, not reliance on the script and how the movable type technology was a perfect tool to respond to high dynamic demand for spreading propaganda. It was the Reformation and the Reformer's attempts to spread their ideas that increased reading of the Bible and other religious material among the public, thus requiring a high level of book production only possible with movable types. Woodblock technology was perfectly able to answer the limited printing demands of the Church and there was no need for a fast and high volume of printing.

Previous literature such as Diamond (1997), Jones (2003), Mokyr (1990) and Montesquieu (1989) illustrate that decentralized political structure in Europe aided economic growth in this area of the world. It is important to note that political structure was also an important factor in the success of the printing industry as well. In countries with a strong and centralized political system, such as England, establishing the new industry and printing controversial material was not easy as the state tried to control the industry, and the initial legal and political costs for establishing the industry were high. In countries that were politically fragmented, such as Germany, the printing industry developed with lower costs and the controversial materials were printed without conflict

with the state. The same argument can be applied to Islamic countries. In the era of the development of the printing industry, the Islamic world had strong centralized government: The Ottoman Empire and Safavid Dynasty in Persian Empire are examples. Therefore, the printing industry and print shops had to overcome political and legal difficulties enforced by a strong state.

Many economists study various aspects of technological changes; some such as Romer (1990), Grossman and Helpman (1991a, 1991b, 1991c), and Aghion and Howitt (1992) offer endogenous growth models in which technological innovations are significant contributors to economic growth. Other scholars study "local technical change" and relate technological change to capital-labor ratio, such as Atkinson and Stiglitz (1969), Basu and Weil (1998), Fare et al. (1994), Acemoglu and Zilibotti (2001), Kumar and Russell (2002), Acemoglu (2003), Los and Timmer (2005), Caselli and Coleman (2006), Jerzmanowski (2007) and Allen (2012). Only a small portion of literature discusses the demand for new technologies as a contributing factor to innovation activities. Schmookler is the most influential scholar on this topic. In his classic book entitled Invention and Economic Growth (1966), he emphasizes that the direction and size of inventions are responsive to the demand. This paper, following Schmookler's tradition, emphasizes the importance of local demand for a new technology. The religious controversy in Europe increased the demand for the new printing technology enough for print shops to overcome the initial fixed cost of establishing a print shop and using the new technology. In other parts of Europe such as

China and Islamic countries, the initial cost of using the new technology was higher than local demand in those areas.

In the next section, I study the printing press technology in the Islamic world. The process of adaptation of the printing industry in the Islamic world was an evolution that happened over the course of a few centuries contrary to the revolution of printing in Europe. Using the historical literature and evidence, I will point out that my religious controversy argument is applicable to the process of adaptation of movable print in Islamic world.

3.3. Printing in the Islamic World

Printing technology was officially established in the Islamic world in the 18th century, centuries after Europe and even then, it took the printing industry about a century to finally find its place in society by the 19th century. Historians and economists have offered various reasons for the late arrival of the printing press to the Islamic world. The first section will explain the reasoning offered by historical and economic literature for late acceptance of movable print in the Islamic world. Section 3.2.2. expands my argument for religious controversy by looking at the history and literature regarding the demand of printing at the time of invention of the technology in Europe until the 18th century.

3.3.1. Related Work

Many researchers have studied the printing industry in the Middle East and Islamic countries and have offered various arguments for the disapproval of and high

restrictions on the printing press. One group of researchers focuses on cultural reasons, arguing that at the time, most of the people in Islamic countries were illiterate and were not able to read books (Kunt 2008), and an oral culture existed for the study and teaching of Islamic texts (Kingdon 1964). Further, copyists showed resistance to printing in order to protect their income (Sabev 2013, p. 393). Another group of researchers have highlighted the difficulty of printing using Arabic alphabets (Ghobrial 2005, AbiFares 2001, Chappell 1999), and cited the legal and religious limitations of printing the most important Islamic book, the Quran (Ghaly 2009). Finally, others argue that no political incentives existed for religious authorities, as well as the Sultan's disapproval of printing.

Atiyeh (1995) and Roper (1995) point out that the *Ulama*⁹ had a monopoly over printing and Islamic literature until the advent of the printing press, which resulted in their resistance to adoption of the new printing technology. Roper (2007) argues that in the Ottoman Empire, the state had longtime equilibrium in mind for regulating the printing industry, whereas in Europe the regulation was pursued by interest groups having short term interests in mind. The political reasons found their way to the economics literature as well, as Coşgel, Miceli and Rubin (2012) explain these political incentives behind the printing restrictions in the Ottoman Empire by focusing on the legitimization of incentive between political, religious and military agents. They claim that in Europe, legitimization between the Church and European state was already compromised before the invention of printing, therefore there were not enough incentives to stop printing. The state needed legitimization from religious and military powers in the

⁹ Islamic Scholars

Ottoman Empire in order to have a low cost tax collection. The new printing technology could have helped give the religious and military the power to revolt against the state at a lower cost. Therefore, the Ottoman state banned the printing press.

The first two factors, cultural and language, can be easily dismissed when comparing the Islamic world with Europe at the era of advancement of printing industry. There was a low level of literacy in Europe before the printing press and the Reformation. In fact, studies note the increasing trend in literacy in Europe after the invention of the printing press and the coming of the Reformation. The same is true for Islamic countries (Roper 1995); as print shops and book production increased, so did literacy in these nations. Since cultural factors were not unique to the Islamic world, these cannot be viewed as a valid reason for late acceptance of the new technology there. Difficulty in the printing of Arabic characters can't be considered an acceptable reason either, since there were Arabic printers in Europe in the 16th century. It should have been easier for native Arabic speakers to use the technology to their advantage than for Europeans. I argue that the lack of demand for printing gave no incentive to overcome the initial difficulties and costs of using the movable type technology. It is true that there was a culture of oral teaching of the Quran and Islamic literature. At the same time, contrary to the fact that Bible reading by the Christian general public was not common before the Reformation, Islam requires all Muslims to read and learn the Quran (Tibawi 1972, p. 27). Where book printing was slow and costly using the woodblock printing technology, Muslims learned the Quran orally instead of referring to the script. The potential for exploring the market for printing the Quran existed if a print shop could rise above the legal and religious problems and get the *Ulama*'s permission for printing.

The political incentives can be argued to be part of the reason but not the complete story, since the Church had monopoly over religious texts in Europe before the Reformation as well. The Church also initially heavily regulated printing of biblical texts and other religious material lacking its approval. The printing regulations lasted from a few years to a few decades in various European countries while it lasted for a few centuries in Islamic countries. The difference between the two religions was the demand for printing causing by religious controversy. Lack of controversial doctrines, such as in the case of afterlife, was the main reason that there was low demand for printing in the Islamic world, while high demand for Reformation-related writings was the main reason that the Church's restrictions on printing were not successful.

3.3.2. History and Demand for Printing in the Islamic World

To understand the printing industry in the Islamic world, it is important to look closely at the printing records and see the types and categories of books that were published as the industry revolutionized. There is no database of all the books printed in Islamic countries at the time, but looking at the historical literature on the topic of writing and printing in the Middle East, we can get an idea of the categories of books printed before and after the advent of movable type. In the Islamic world, like as in Europe in the Middle Ages, religion and printing were integrated. The majority of literature in the Islamic world was written in Arabic at the time of the invention of the printing press.

While Turkish and Persian were also languages in use in the Islamic world, Arabic was the main language used in Islamic literature. The Quran and Sunnah¹⁰ were the basis of Islam and most printed books. Other than the Quran, most of the printed materials before the invention of movable type were literature and poetry, sometimes translated from Persian, or scientific literature (Pederson 1984, p. 18).

Roper (1989) and Pederson (1984) point out that while printing within the borders of the Islamic world didn't started until the 18th century, printing in Arabic had been done by European printers since the 16th century. Most of these Arabic books were targeted for export to Arabic speaking countries. Table 3 shows timing timeline of Arabic printing both in Europe and in Islamic countries. The table shows that most of the earliest books printed in Arabic in Europe were Christian books published as early as 1514, and most of these books were targeted for export to Arabic speaking countries. While historians have noted this book export to Islamic countries, the economic literature has failed to do so. It is not necessary to have printing capabilities located in a country or specific geographic area in order to have books and propaganda flooded that area. When there is a market for books and government regulations restrict printing, books can be printed and exported to that area. This was the case in Europe as large numbers of books were printed in France and Italy and were sent to other parts of Europe that had restriction on book printing.

¹⁰ Collection of deeds and sayings of Muhammad, the prophet of Islam.

Table 3: Timing of Arabic Printing¹¹

1514	Publication of the first Arabic books in Italy including Christian texts
1530	Arabic Quran printed in Venice
1564-1614	Medici Press in Rome publish various Arabic books including translations of the Gospels (1591), scientific texts, Arabic grammar
1600s Christian texts	Many print shops in Europe printed Arabic books mostly including
1706 Christian texts	First Arabic print shop in Middle East (Aleppo, Syria) publishing
1726	First print shop with official approval of religious authorities and Sultan which was still forbidden from printing religious books.
1734	Another Arabic print shop in Lebanon
1795	Printing academic books in military school in Istanbul
1798	Napoleon brought printing press to Egypt
1822	Official press in Cairo
1834	Missionary press in Beirut

Roper (1989, p. 226) offers three possible reasons for the printing of Arabic books in Europe: the first and most important reason was familiarizing the Arabic speaking countries with Christian texts (also Avakin 2013, p. 258). Spreading propaganda was the incentive behind the establishment of Arabic print shops. Religious competition and controversy between the two religions created a demand for printing in languages

 $^{11}\underline{http://isites.harvard.edu/fs/docs/icb.topic 482827.files/H81b\%20 The\%20 Impact\%20 of\%20 The\%20 The$ 20Print%20-%20Arabic%20Book%20Handout%20FINAL.pdf (isites.harvard.edu/

accessed 5/4/2014)

other than those of the Europeans. The printing of Christian books started in the 16th century and continued for centuries even when printing was restricted in Islamic countries. It is interesting to note that book export was permitted in the Ottoman Empire (Sabev 2013, p. 395). A good example is the 1671 Arabic Bible published based on the Vulgate Bible.

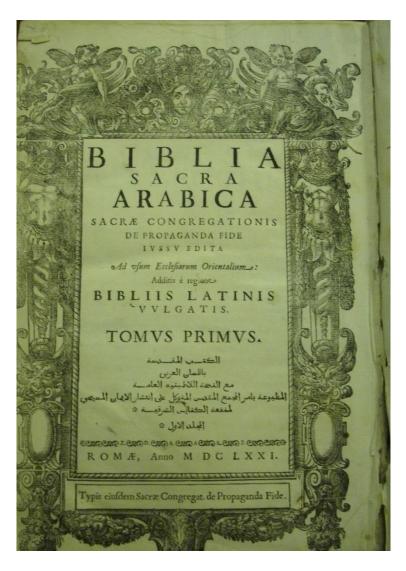


Figure 7: Arabic Bible Printed in 1671¹²

The second reason for the printing of Arabic texts in Europe was the expansion of the printing market. Now that there was Arabic printing capabilities and export of Arabic books, print shops began to print the Quran and other Islamic literature in Arabic as well. Figure 8 is the first page of the Quran printed in Arabic in Venice.



 $^{^{12} \} Source: \underline{http://inthebeginningwerespecial collections.wordpress.com/category/arabic-bible/}$

Figure 8: Quran printed using movable type by Pagnino and Alessandro Paganini in Venice 1537¹³

European printers were not so successful in marketing their Arabic Quran in Islamic countries because typos and other print mistakes in printing the Quran and other Islamic literature were not religiously acceptable. Mahdi (1995) uses the example of Alessandro Paganino's Venice Quran and the 1694 Quran printed in Hamburg with their many printing errors as the reason why the printed Quran from Europe was not accepted in Islamic countries. There was an emphasis in Islam that the Quran, the holy book, needed to get printed without any alterations, misprints, or changes in wording. European printers, not necessarily being very fluent in Arabic, did not insure printing accuracy. Lack of attention to religious and cultural sensitivity to the Quran in Islamic countries caused the European printers to lose their credibility in printing Islamic materials. Even on an occasion in the 17th century, people in the Ottoman Empire threw a large shipment of Quran's printed in England into the sea (Sabev 2013, p. 395).

The third incentive behind the Arabic printing was the familiarization of the European scholars with Arabic texts and literature. The printers had published Arabic grammar books and literature. In order to market various books, there were also translated publications of the Quran and other Arabic literature in English and other European languages. An example is the 1649 London publication of the Quran in English.

¹³ Sourse: www. Muslimheritage.com

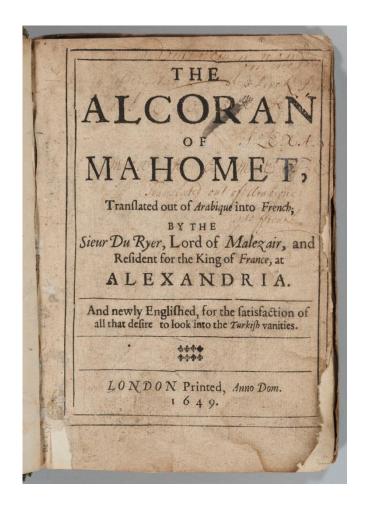


Figure 9: English Quran Printed in London 1649¹⁴

Printing in the Persian Empire has a similar history to that of the Ottoman Empire. Before the printing press using woodblock technology books mostly include poems, stories and literature, and Islamic literature printed in Arabic. The Persian alphabet grew out of the Arabic alphabet of Islam even though Zoroastrians used the Pahlavi writing until the 11th century. This made the printing of Persian literature by Arabic printers very convenient. Dutch printers were the first to do so in 1639, as Louis

¹⁴ Source: <u>https://exhibitions.cul.columbia.edu/exhibits/show/quran/item/6109</u>

de Dieu published the first two books in Persian: "The Life of Christ" and "The Life of Saint Peter," which was followed by multiple other Persian books such as Persian grammar. In a few years other print shops in Amsterdam, Vienna, Paris, London and Rome started printing Persian books. Most of the books were Christian literature, Persian poems, and ancient literature (Afshar 2009, p. 431). The earliest books using movable print was printed by Armenian Christians living in Jolfa, Isfahan, which included religious books in 1638. The first Persian book was not printed until 1818.

Thus, prior to the printing press the main material printed in Arabic speaking countries using woodblocks were principally the Quran, religious literature, light literature, poems, stories, and scientific literature (Pederson 1984, pp. 18-19). There was no need or demand for a high volume of printing or rapid printing. After the introduction of movable type to Islamic world, states and religious authorities heavily regulated the use of new technology and the books were limited to a low volume of books printed in the Islamic world using old technologies. The Arabic books printed in Europe (mostly in France and Italy) and exported to Islamic countries and the Ottoman Empire permitted non-Muslims to print their material as early as 16th century. The Jewish and Christian works published in Islamic countries were mainly in other languages such as Hebrew, Syriac and Armenian (Kreiser 2001, Avakin 2013, p. 257).

The export of Arabic books from Europe made these books scarce and expensive (Roper 2007, p. 229) which contradicted the main purpose of Christian missionary book exporters. Therefore, eventually in the 18th century Europeans established the first print shops in the Islamic countries and started publishing Christian books at lower cost. Other

than the print shops established by the Europeans in the Islamic world, local print shops gradually started to appear; however, since printing was not in demand, these businesses were not very successful. Only intellectuals with non-monetary incentives tried their hand in printing. A good example of this argument is the first official Muslim print shop in the Ottoman Empire, established by Ibrahim Muteferrika. His persistence helped him to overcome cultural and legal obstacles for the establishment of his print shop. He wrote a book titled "The Utility of Printing" in an attempt to convince the state and the Ulama that the printing press would benefit Muslims. He met and talked with the *Ulama* and got the official religious permission (Fatwa) for printing religious materials (Sabev 2013). He officially established his print shop in 1726 and published a total of approximately 11,000 books. But Muteferrika's print shop died with him in 1742. No one else had the incentive to continue his work as the demand for book printing and opportunities for profit making were low. As Sabev (2013, p. 403) points out: "Except for several books that sold well. Muteferrika's effort in printing could seem the expression of personal enthusiasm rather than a response to a real demand in Ottoman Turkish society for increased number of identical copies of books in particular topic."

Books printed at this time were still considered a luxury item and offered in limited number. As Kunt (2008, p. 99) points out, Muteferrika "was publishing elite books for the reading elite; both by subject matter and by high prices charged his was an exclusive press." The topics of books printed still included the same topics as before the invention of printing press: religious literature (mostly the Quran) and poetry (in Arabic, Persian, and Turkish). After Muteferrika's death, other print shops similarly appeared

across the Islamic world, started by intellectuals trying to advance the societal culture and knowledge; however, there was a thin profit margin, if any.

It wasn't until the 19th century that the printing industry succeeded in finding its way into Islamic society. As Pedersen (1984, p. 135) states: "Printing only became a thriving business in 1834, when American Protestant missionaries moved an Arabic printing from Malta to Beirut." In the 19th century Ottoman Empire, the state used the help of the printing press to promote its civil and religious reformist propaganda and this gave the industry a boost toward its advancement (Sabev 2013, p. 408). As the number of print shops increased, the cost of printing decreased and the printers gradually got more liberty in their printing of materials. As a result of the establishment of the printing press and higher level of book production in the Islamic world, literacy increased and the Islamic world faced cultural and civil changes that had happened a few centuries earlier in Europe.

While most literature focuses on the late arrival of printing in the Islamic world, study of the demand for printing is mostly missing from the literature. With the relative lack of religious controversies in a religion and no need for spreading propaganda, there was no high demand for printing that the old woodblock technology could not satisfy. The *Ulama* and state unwillingness to relax control over the published materials didn't make the process of transition to movable print easier. Eventually, the competition between Islam and Christianity was the force behind the advancement and introduction of printing to the Islamic world, as was the case of Arabic printing in Europe during the

16th-18th centuries and the establishment of print shops in the Islamic world in the 18th century.

3.4. Conclusion

It has been argued in the literature that the invention of the printing press in the 15th century aided the Protestant Reformation and even without the printing, the Reformation would have managed to spread across Europe. This paper focuses on the impact of the Reformation on the printing industry. The high demand for printing by the Reformation leaders led to advancement of printing industry. At the time of the Reformation, the writings of Martin Luther and others on controversial religious topics such as the sale of indulgences spurred the need for speedy printing of their writings while at the same time, the rapid spread also meant there was a high volume requirement. The new movable type technology was able to efficiently answer both of these demands. Conversely, the lack of similar controversy in Islam meant a low demand for printing. Ironically, Christians established the first Arabic print shops, initially in Europe and later in Islamic countries, in order to spread Christianity and publish Christian texts in Arabic. The subsequent competition between Islam and Christianity was the reason for the introduction of printing in Arabic countries.

REFERENCES

- AbiFares, H. S. *Arabic Typography, A Comprehensive Source Book*. London: Saqi Books, 2001.
- Acemoglu, D. "Factor Prices and Technical Change: From Induced Innovations to Recent Debates." In *Knowledge, Information and Expectations in ModernMacroeconomics: In Honor of Edmund Phelps*, ed. by Philippe Aghion, et al. Princeton University Press, 2003.
- Acemoglu, D, and F. Zilibotti. "Productivity Differences," *Quarterly Journal of Economics*, 2001. 116 (2): 563–606.
- Afshar, I. "Printing and Publishing." In *General Introduction to Persian Literature*, ed. J. T. P. de Bruijn: 430–446. History of Persian Literature 1. 2009.
- Aghion, P. and P. Hewitt. "A Model of Growth through Creative Destruction." *Econometrica*. 1992. 60: 323–51.
- Allen, D. "Order in the Church: a Property Right Approach." *Journal of Economic Behavior*. 1995. 27 (195): 97–117.
- Allen, R. C. "Technology and the Great Divergence: Global Economics and Development since 1820." *Exploration in Economic History*. 2012. 49(1): 1–16.
- Arjomand, S. A. The Shadow of God and the Hidden Imam. Religion, Political Order and Societal Change in Shi'ite Iran from the Beginning to 1890. Chicago: University of Chicago Press, 1984.
- Atiyeh, G. N. (ed.) The Book in the Islamic World: The Written Word and Communication in the Middle East. Washington: Library of Congress, 1995.
- Atkinson, A. B., and J. E. Stiglitz. "A New View of Technical Change," *Economic Journal*, 1969. 79: 573–8.
- Avakin, H. A. "Islam and the Art of Printing." In *The History of Book in the Middle East*. UK: AshGate Publishing Company. 2013.

- Bainton, R. H. *Here I Stand: A Life of Martin Luther*. Nashville: Abingdon Press, 1995.
- Barro, R. J and R. M. McCleary. "Which Countries Have State Religions?" *The Quarterly Journal of Economics*. 2005. 120(4): 1331–1370.
 - Bassnett, S. Translation Studies. [1980] Taylor & Francis Group. 3rd edn. 2002.
- Basu, S. and D. N. Weil. "Appropriate Technology and Growth," *Quarterly Journal of Economics*. 1998. 113 (4): 1025–54.
- Baten, J. and J. L. Van Zanden. "Book Production and the Onset of Modern Economic Growth." *Journal of Economic Growth*. 2008. 13(3): 217–235.
- Becker, S. O. and L. Wößmann. "Luther and the Girls: Religious Denomination and the Female Education Gap in 19th Century Prussia." *Scandinavian Journal of Economics*. 2008. 110(4): 777–805.
- Becker, S. O. and L.Wößmann. "Was Weber Wrong? A Human Capital Theory of Protestant Economic History." *Quarterly Journal of Economics*. 2009. 124(2): 531–596.
- Becker, S. O. and L. Wößmann. "The Effect of Protestantism on Education Before the Industrialization: Evidence from 1816 Prussia." *Economics Letters*. 2010. 107(2): 224–228.
- Bernard, G.W. *The King's Reformation: Henry VIII and the Remaking of English Church.* Yale University Press, 2005.
 - Blum, P. R. Philosophy of Religion in the Renaissance. UK: Ashgate. 2010.
- Bodin, J. *Colloquium of the Seven about Secrets of the Sublime*. Translated: M. L. D. Kuntz. Princeton University Press, 1975.
- Brecht, M. *Martin Luther His Road to Reformation 1483-1521*. Translated: James Schaff. Philadelphia: Fortress Press, 1985.
 - Burnett, C. Introduction of Arabic Learning into England. British Library, 1997.
- Burns, R. S. J. "Christian-Islamic Confrontation in the West: The Thirteenth-Century Dream of Conversion." *The American Historical Review*. 1971. 76(5): 1386–1434.

- Buringh, E. and J. L. Van Zanden. "Charting the "Rise of the West": Manuscripts and Printed Books in Europe, A Long-Term Perspective from the Sixth through Eighteenth Centuries." *Journal of Economic History*. 2009. 69(2): 409–445.
 - Campo, J. E. and J. G. Melton. *Encyclopedia of Islam*. Leiden: Brill, 2009.
- Cantoni, D. "The Economic Effects of the Protestant Reformation: Testing the Weber Hypothesis in the German Lands." Forthcoming.
- Cantoni, D. "Adopting a New Religion: The Case of Protestantism in 16th Century Germany." *Economic Journal*. 2012. 122(560): 502–5311.
- Caselli, F., and W. J. Coleman, II. "The World Technology Frontier," *American Economic Review*. 2006. 96(3): 499–522.
- Cassone, A. and C. Marchese. "The Economics of Religious Indulgences." *Journal of Institutional and Theoretical Economics*. 1999. 155(3): 429–442.
- Cevetello, J. F. X "Purgatory: In the Bible." In *New Catholic Encyclopedia*, 2nd edn. Detroit: Thompson Gale, 2003.
- Chappell, W. A Short History of the Printed Word. 2nd edn. Point Roberts, WA: Hartley and Marks, 1999.
- Chu [Zhu], L. L., "Mass communication Theory: A Chinese Perspective." In *Communication Theory: An Asian Perspective*, ed. W. Dissanayake, 9th edn. (pp. 126-38). Singapore: Amic, 1998.
- Cosgel, M. M and T. Miceli "State and Religion." *Journal of Comparative Economics*. 2009. 37(3): 402–416.
- Coşgel, M. M., T. Miceli and J. Rubin. "The Political Economy of Mass Printing: Legitimacy, Revolt, and Technological Change in the Ottoman Empire." *Journal of Comparative Economics*. 2012. 40(3): 357–371.
- Davidson, A. B. "The Medieval Monasteries as Franchise Monopolist." *Journal of Economic Behaviour and Organization*. 1995. 27: 119–127.
- Diamond, J. Guns, Germs, and Steel. New York: W.W. Norton & Company, 1997.

- Dickens, A.G. *The English Reformation*. 2nd edn. Pennsylvania State University Press, 1989.
- Dickens, A.G. *Reformation and Society in Sixteenth Century Europe*. New York: Harcourt, Brace, & World, 1968.
- Dittmar, J. "Information Technology and Economic Change: The Impact of the Printing Press." *The Quarterly Journal of Economics*. 2010. 126(3): 1133–1172.
- Eisenstein, E. L. *The Printing Press as an Agent of Change: Communications and Cultural Transformations in Early Modern Europe*. Cambridge: Cambridge University Press, 1979.
- Ekelund, R. B., Hebert, R. F. and R. D. Tollison. "An Economic Analysis of the Protestant Reformation. Purgatory as a Market-pull Innovation." *Journal of Political Economy*. 2002. 110(3): 646–671.
- Ekelund, R. B., Hebert, R. F. and R. D. Tollison. "The Economics of Sin and Redemption." *Journal of Economic Behavior and Organization*. 1992. 191–15.
- Ekelund, R. B., Hebert, R. F. and R. D. Tollison. *The Marketplace of Christianity*. Cambridge, MA: The MIT Press, 2006.
- Ekelund, R. B., Hebert, R. F., Tollison, R. D., Anderson, G. and A. Davidson. *Sacred Trust: The Medieval Church as an Economic Firm.* Oxford University Press, 1996.
- Ekelund, R. B., Hebert, R. F. and R. D. Tollison. "An Economic Model of the Medieval Church: Usury as a Form of Rent Seeking." *Journal of Law, Economics, and Organization*. 1989. 5(2): 307–331.
- Eklund, R. *Life Between Death and Resurrection According to Islam*. Uppsala: Almqvist & Wilksells boktr, 1941.
- Färe, R., Grosskopf, S., Noriss, M. and Z. Zhang. "Productivity Growth, Technical Progress, and Efficiency Change in Industrialized Countries." *American Economic Review.* 1994. 84(1): 66–83.
- Febvre, L. and Henri-Jean M. *The Coming of the Book: The Impact of Printing*, 1450-1800. London: Verso, 1958.
- Forell G. W. *Career of the Reformer II*. Vol. 32 of *Luther's Works*, H. T. Lehmann, ed. Minneapolis, Fortress Press, 1958.

- Ghaly, M. "The Interplay of Technology and Sacredness in Islam: Discussions of Muslim Scholars on Printing the Quran." *Studies in Ethics, Law, and Technology*. 2009. 3(2): Article 3.
- Ghobrial, J. P. "Diglossia and the 'Methodology' of Arabic Print." Paper presented at the Second International Symposium on the History of Printing and Publishing in Languages and Countries of the Middle East. 2005. BNF, Pasid: 2-4 November.
 - Gilmont, J. F. (ed.). The Reformation and the Book. Aldershot: Ashgate, 1998.
 - Greenblatt, S. Hamlet on Purgatory. Princeton University Press, 2001.
- Greenslade, S. L., ed. *The Cambridge History of the Bible: The West from the Reformation to the Present Day.* The Cambridge University Press, 1963.
- Grossman, G. M., and E. Helpman. *Innovation and Growth in the Global Economy*. Cambridge, Mass.: MIT Press, 1991 (a).
- Grossman, G. M., and E. Helpman. "Quality Ladders and Product Cycles." *Quarterly Journal of Economics*. 1991 (b). 106: 557–86.
- Grossman, G. M., and E. Helpman. "Quality Ladders in the Theory of Growth." *The Review of Economics Studies*. 1991 (c). 58: 43–61.
- Gunaratne, S. A. Paper, "Printing and the Printing Press: A Horizontally Integrative Macrohistory Analysis." *International Communication Gazette*, 2001. 63(6): 459–479.
- Halevi, L. *Muhammad's Grave: Death Rites and the Making of Islamic Society.* Columbia University Press, 2011.
- Hayes, Z. J. In *Four Views of Hell*. W. Crockett, ed . Michigan: Zondervan Press, 1996.
- Hillerbrand, H. J. *The Protestant Reformation*. New York: Walker and Company, 1968.
- Hillerbrand, H. J. "Martin Luther: Indulgences and Salvation." In *Encyclopaedia Britannica*. 2007.
- Holborn, L. W. "Printing and the Growth of a Protestant Movement in Germany from 1517 to 1524." *Church History*. 1994. 11(2): 123–137.

- Hull, B. "Religion, Afterlife, and Property Rights in the High Middle Ages." *Studies in Economic Analysis*. 1989. 12(1): 3–21.
- Hull, B., Bold, F. "Toward an Economic theory of the Church." *International Journal of Social Economics*. 1989. 16(7): 5–16.
- Hull, B., Bold, F. "Hell, Religion, and Cultural Change." *Journal of Institutional and Theoretical Economics.* 1994. 150 (3): 447–464.
- Iannaccone, L. R. "The Consequences of Religious Market Structure: Adam Smith and the Economics of Religion." *Rationality and Society*. 1991. 3: 156–77.
- Imam M.S. Translated: Adam, A. *The Shi'a and Their Belief*. Washington. D.C: Imam Shirazi World Foundation, 2008.
- Iyigun, M. "Luther and Suleyman." *The Quarterly Journal of Economics*. 2008. 123(4): 1465.
- Jermanowski, M. "Total Factor Productivity Differences: Appropriate Technology vs. Efficiency." *European Economic Review*. 2007. 51: 2080–2110.
- Johnson, N. D. and Koyama, M. "Legal Centralization and the Birth of the Secular State, *Journal of Comparative Economics*. 2012. 41(4):959–978.
- Jones, E. L. *The European Miracle* (3rd edn.). Cambridge: Cambridge University Press, 2003.
- Kabbani, S. M. H. *Encyclopedia of Islamic Doctorine*. Vol. 4, Intercession (Shafaa, Tawassul, Istighatha). Chicago, IL: As-Sunna Foundation of America Publications, 1998.
- Kapr, A. Johann Gutenberg: The Man and His Invention. UK: Scolar Press, 1996.
- Kingdon, R. M. *Patronage*, *Piety and Printing in Sixteenth-Century Europe*. Duke University Press, 1964.
- Kreider, A. English Chantries: The Road to Dissolution. Harvard University Press, 1979.

- Kreiser, K. Bamberg, S. Bambery, U. Sprache, LT. Geschichte and Kultur ed. *The Beginning of Printing in the Near and Middle East: Jews, Christians and Muslims*. Harrassowitz. Wiesbadan, 2001.
- Kumar, S. and R. R. Russell. "Technological Change, Technological Catch-Up, and Capital Deepening: Relative Contributions to Growth and Convergence". *American Economic Review*, 2002. 92: 527–48.
- Kunt, I. M. "Reading Elite, Elite Reading." in P. Sadgrove (ed.), *History of Printing and Publishing in the Middle East: papers from the second Symposium on the History of Printing and Publishing in the Languages and Countries of the Middle East.* Oxford: Oxford University Press on behalf of the University of Manchester, 2008.
- Kut, G. A. *The Encyclopedia of Islam*, New edn, Leiden Brill, 1991. @Brill Online Reference Work.
- Leff, G. "Heresy and the Decline of the Medieval Church." *Past & Present*. 1961. 20: 36–51.
- Le Goff, J. *The Birth of Purgatory*. Chicago: The University of Chicago Press, 1984.
- Lehmann, Forell G.W. and H. T. Luther's Works, Volume 32: Career of the Reformer II. Fortress Press, 1958.
 - Lindberg, C. The European Reformation. Wiley-Blackwell, Second Edition, 2010.
- Los, B. and M. P. Timmer. "The 'Appropriate Technology' Explanation of Productivity Growth Differentials: An Empirical Approach," *Journal of Development Economics*. 2005. 77: 517–31.
- Lunt, W. E. *Papal Revenue in Middle Ages*. 2 Vol. New York: Columbia University Press, 1934.
- Luther, M. *Of God's word*, accessed online @ Christian Classics Ethereal Library accessed online at 4/1/2014. [1566] 1893.
- Mahdi, M. "From the Manuscript Age to the Age of Printed Books." In *The Book in the Islamic World: The Written Word and Communication in the Middle East*, ed. G. N. Atiyeh. Washington: Library of Congress, 1995.

- Margolis, M. L. *The Story of Bible Translations*. Philadelphia: The Jewish Publication Society of America, 1917.
- Marshall, P. Beliefs and the Dead in Reformation England. Oxford University Press, 2004.
 - Mokyr, J. The Lever of Riches. Oxford, U.K.: Oxford UP, 1990.
- Montesquieu, C. *The Spirit of the Laws*. translated by Anne M. Cohler, Basia C. Miller, and Harold S. Stone. Cambridge: Cambridge University Press, 1989.
- Morris, C., *The Papal Monarchy: the Western Church from 1050 to 1250*. Oxford: Clarendon Press, 1989.
- Murray, A. Confession as a Historical Source in the 13th Century. In The Writing of History in the Middle Ages. Edited by R. H. C. Davis and J. M. Wallace-Hadrill. Oxford: Clarendon Press, 1981.
- Needham, P. *The Printer & the Pardoner: An Unrecorded Indulgence Printed by William Caxton for the Hospital of St. Mary Rounceval, Charing Cross.* Washington: Library of Congress, 1943.
- Norman, D. *Islam and the West: The Making of an Image*. London: Oneworld Publications, 2009.
- Pelikan, J. The Christian Tradition: A History of the Development of Doctrine, Vol. 4: Reformation of Church and Dogma (1300-1700). Chicago: University of Chicago Press, 1984.
- Pedersen, J. *The Arabic Book*. Translated by Geoffrey French. Princeton University Press, 1984.
- "Plenary Indulgence." In *The Oxford Dictionary of Christian Church*. New York: Oxford University Press, 2005.
- Renouard, Y., *The Avignon Papacy*, 1305–1403. Faber and Faber, London. translated by Denis Bethell, [1954] 1970.
- Romer, P. M. "Endogenous Technological Change." *Journal of Political Economy*. 1990. 98(5): S71–S102.

- Roper, G. "The Export of Arabic Books from Europe to the Middle East in the 18th Century" in BRISMES: Proceedings of the 1989 International Conference on Europe and the Middle East (Durham; Oxford), pp. 233–66.
- Roper, G. "Faris al-Shidyaq and the Transition from Scribal to Print Culture in the Middle East," In *The Book in the Islamic World: The Written Word and Communication in the Middle East*, ed. G. N. Atiyeh. Washington: Library of Congress, 1995.
- Roper, G. "The Printing Press and Change in the Arab world." In *Agent of change: Print culture studies after Elizabeth L. Eisenstein*, S. A. Baron, E. N. Lindquist & E. F. Shevlin, eds. University of Massachusetts Press, 2007.
- Roper, G. (ed.). *The History of Book in the Middle East*. UK: AshGate Publishing Company. 2013.
- Rosen, S. *Ultimate Journey: Death and Dying in the World's Major Religions*. Westport. US: Praeger, 2008.
- Rubin, J. Forthcoming. "Printing and Protestants: an empirical test of the role of printing in the reformation." *Review of Economics and Statistics*.
- Rubin, J. "Institutions, the Rise of Commerce and the Persistence of Laws: Interest Restrictions in Islam and Christianity." *The Economic Journal*, 2011. 121(557): 1310–1339.
 - Rupp, G. Luther's Progress to the Diet of Worms. London: SCM Press, 1951.
- Sabev, O. "A Virgin Deserving Paradise or a Whore Deserving Poison: Manuscript Tradition and Printed Books in Ottoman Turkish Society." In *The History of Book in the Middle East*. UK: AshGate Publishing Company, 2013.
 - Scarisbrick, J. J. Henry VIII. Yale University Press, 1997.
- Schmidtchen, D. and Mayer, A. "Established Clergy, Friars and the Pope: Some Institutional Economic of the Medieval Church." *Journal of institutional and Theoretical Economics*. 1997. 153: 122–165.
- Schmookler, Jacob. *Invention and Economic Growth*. Cambridge: Harvard University Press, 1966.
- Schwartz, W. Principles and Problems of Biblical Translation, Some Reformation and Controversies and Their Background. Cambridge University Press, 1955.

- Shaffern, R. W. "Images, Jurisdiction, and the Treasury of Merit." *Journal of Medieval History*. 1996. 22(3): 237–247.
- Smith, C. G. D. *The Teaching of the Catholic Church: A Summary of Catholic Doctrine*. New York: The Macmillan Company, 1956.
- Smith, H. M. Henry VIII and the Reformation. New York: Russell & Russell Inc., 1962.
- Smith, J. I. and Y. Y. Haddad. *The Islamic Understanding of Death and Resurrection*. USA: Oxford University Press, 2002.
- Smith, J. I. "Afterlife: An Overview." *Encyclopedia of Religion*. Gale Group online.
- Southern. R. W. Western Views of Islam in the Middle Ages. Harvard University Press, 1962.
- Southern. R. W. Western Society and the Church in the Middle Ages. London: Penguin, 1970.
- Stone, L. "Literacy and Education in England 1640-1900." *Past & Present*, 1969. 42: 69-139.
- Sweetman. J. W. *Islam and Christian Theology: A Study of the Interpretation of Theological Ideas in the Two Religions*. Cambridge, UK: James Clarke & Co. 2002.
- Thornton, M. "The Pope and the Price of Leather." *Journal of Institutional and Theoretical Economics*. 1992. 148(3): 452–459.
- Tibawi, A. L. *Islamic Education: its Traditions and Modernization into the Arab National Systems.* Luzac, 1972.
- Tierney, B. *The Crisis of Church and State, 1050-1300.* University of Toronto Press, 1964.
- Tsien, T. H., "Paper and Printing." In *Science and Civilization in China*, J. Needham, ed. Vol. 5, Part 1, Section 32. Cambridge: Cambridge University Press, 1985.
- Vainker, S. J., *Caves of the Thousand Buddhas*. Ed. Whitfield, R., Farrer, A. S and J. Rawson. British Museum Publications for the Trustees of the British Museum, 1990.

Van Scott, M. Encyclopedia of Hell. New York: St. Martin's Press, 1998.

Walls, J. L. *Purgatory: The Logic of Total Transformation*. Oxford University Press, 2012.

http://www.bl.uk/treasures/gutenberg/indulgences.html

BIOGRAPHY

Zeynab Masoudnia started her PhD with George Mason University after she received her MA in Economics in 2009. She became a PhD candidate in 2013. She received her BSc from Alameh Tabatabaei University in 2004. While working on her PhD, she also was a graduate fellow at the United Nations Association of the National Capital Area (UNNCA) in Spring 2013, and worked at a research assistant at George Mason University School of Management and the National Bureau of Economic Research.