AN APPLICATION OF MARXIAN AND WEBERIAN THEORIES OF CAPITALISM:

THE EMERGENCE OF BIG BUSINESSES IN THE

UNITED STATES, 1861 to 1890

Penny J. Magness, B.A., M. A., M.S.W., M.B.A.

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APPROVED:

Milan Zafirovski, Major Professor
Dale Yeatts, Committee Member
Keith Turner, Committee Member
Daniel G. Rodeheaver, Chair of the
Department of Sociology
Costas Tsatsoulis, Interim Dean of the
Toulouse Graduate School
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This study was an examination of businesses that became big businesses in the United States during the time period between the years of 1861 and 1890, a period of time frequently referred to as the “big business era.” The purpose of the study was to identify actions taken by businesses that enabled them to become and remain big businesses. A secondary purpose of the study was to show that these actions were explained by theories of Karl Marx and Max Weber. The results of the study showed that businesses which took specific actions were able to become and remain big businesses and these actions were explained by the theories of Marx and Weber. The results of the study demonstrate the ability of classical sociological theory to explain macro-level social change.
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By

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CHAPTER 1
INTRODUCTION

Business, the activity of selling to voluntary buyers for a profit, has existed for about five thousand years (Roberts, 2011). Prior to this time, economic activities had consisted of activities conducted by, and for the benefit of, an entire community and involved the activities of exchange, either by reciprocity or redistribution (Polanyi, 2001[1944]). Business evolved over time, due in part to improvements in transportation as well as a growing population, but the greatest impact on the evolution of business was the emergence of big businesses in the latter part of the nineteenth century.

The emergence of big businesses was a unique phenomenon in the history of business. In a relatively short amount of time from the beginning of the American Civil War to the end of the ninetieth century, big businesses formed in many industries where only small, family-owned businesses or, in some rare instances, small partnership businesses, had existed (Licht, 1995). Big businesses did not blend in with existing traditional firms that had been the norm of American business, instead they “seized and occupied major terrain…garnering quick and widespread attention” (Licht, 1995, p. 133).

Many scholars have viewed the emergence of big businesses as the “second” industrial revolution (Licht, 1995). In the period of time between 1860 and 1904, the number of businesses with a value of at least $10 million increased from zero to over three hundred (Blackford & Kerr, 1994). The economy of the United States became bifurcated, the economic center dominated by big businesses with small firms at the periphery.
Big businesses were not just small businesses on a larger scale; they were different in structure and operations (Blackford & Kerr, 1994). The types of businesses that existed before the advent of big businesses were single-owner proprietorships or partnerships that had small staffs and did business in a limited geographical area. If the owner of the business died, or could not continue running the business for some other reason, the business would usually be dissolved. The same would occur if an investor left a partnership. Big businesses, however, were almost always organizations managed by a large numbers of professional personnel that provided limited liability for investors. This situation made them attractive investments to industrialists as did the knowledge the corporation would continue in operation even if its founders left the business.

The operations of big businesses included marketing and distributing their products on a large geographic scale. Due to their size and breadth of operations, they required more sophisticated organizational structures. Big businesses were often vertically integrated to control their economic destinies or horizontally integrated with other companies to control a step in the production or distribution process. Sometimes big businesses did both.

The size of the businesses and their domination of the economy also significantly impacted society. The greatest change during this period was the life in of the American worker (Calhoun, 2007). American workers found their lives increasingly dependent on the wage system of labor and their lives tended to increasingly revolve around their work. The American worker also became increasingly the American consumer.
Purpose of the Study

The purpose of this study is to describe what actions businesses took to become big businesses and the actions they took to remain big businesses during the period from 1861 to 1890, commonly referred to as the “big business era.” The success of businesses that used these actions has led to these actions becoming the norm of business operations and has contributed to the evolution of capitalism in the United States and globally.

The study will also demonstrate that Marx’s theory of capital accumulation and Weber’s theory of economic rationalization can explain the actions taken by businesses which allowed them to become and remain big businesses. The combination of these theories will explain the role social and economic factors, including early small-scale non-industrial capitalism, had in the emergence of big businesses and large-scale industrial capitalism during the “big business era.”

The knowledge gained from this study will also aid in the comprehension of the process of capitalism as a unique social phenomenon (Dahrendorf, 1959; Schumpeter, 1942). Capitalism is an economic system embedded in a cultural system and therefore does not exist in isolation from other aspects of society. A culture supportive of capitalism is one whose population exhibits boundless energy to amass and create wealth by means of profit. This is the position held by such divergent representatives of opinion as the conservative Edwin Burke and the revolutionaries Karl Marx and Frederick Engels. The cultural traits required for the existence of capitalism exist in a multitude of social and political arrangements.
The study will also provide information concerning the evolution of capitalism. Capitalism, a business system based on individual investments in the production of marketable goods, began to replace traditional means of conducting business in the sixteenth century (Appleby, 2010). This change in the means of conducting business originated in England due to scientific advancements, agricultural improvements, and global explorations. The English brought capitalism to their colonies in the West where it became an important aspect of the early United States. The newly independent United States flourished under capitalism in large part due to a cultural system that valued personal traits such as individualism and independence, especially in the North (Appleby, 2010).

The beginning of the “big business era” is frequently viewed by historians as the beginning of the phenomenon of globalization of which capitalism is a key component (Stearns, 2010). It would not be possible to understand how global capitalism developed without an understanding of what actions businesses took to become and remain big businesses in the second half of the nineteenth century.

The study will also demonstrate how the change in businesses impacted society, particularly work. As Porter notes (2006) in The Rise of Big Business 1860-1920, “The coming of the giant enterprises of the Gilded Age had profound effects on American society, on politics, on the law, and on many aspects of our national life” (p. 2). According to Alan Trachtenberg (1982), the consequences of the establishment of big business was that “it wrenched American society from the moorings of familiar values, that it proceeded by contradiction and conflict…the deepest changes …lay at the level of culture” (p. 7).
Rationale

The rationale for this study is the need for a comprehensive and satisfactory explanation for the emergence of big businesses. A theoretical exposition that provides a comprehensive explanation for this phenomenon is desirable and needed as it will not only improve understanding of the emergence of big businesses, but it will also aid in understanding the role of capitalism in macro level social change.

The emergence of big businesses has been the subject of substantial research and numerous explanations from many fields of study yet a comprehensive explanation that explains this phenomenon still does not exist (Perrow, 2002). There is agreement among theorists of the emergence of big businesses that changes occurred in American business and these changes dramatically impacted American society and culture. There is, however, disagreement on the nature of the changes. As Roy (1997) notes in his book Socializing Capital: The Rise of the Large Industrial Corporation in America, “The nature of the changes has been vigorously debated, not only in terms of what explains the transformation, but also in terms of what is to be explained” (p. 5).

The earliest writings on the “big business era” focused on the perceived ethics of the leaders of the businesses or on the impact of the businesses on society rather than explanations of their appearance (Porter, 2006). These writings were generally slanted attacks on the so called “robber barons” as exemplified by Henry Demarest Lloyd’s Wealth against Commonwealth (1894) or Matthew Josephson’s The Robber Barons (1934) and reflected a “liberal” or “progressive” view of history where the emergence of big businesses was seen as inevitable as were business concentrations. A change in the view of big businesses would not arrive until the 1950s.
The “industrial statesman” view which began in the 1950s, assumed that big businesses made positive contributions to the economy by creating efficiency and organization (Porter, 2006). This revisionist view of history regarded almost any behavior conducted on behalf of businesses as reasonable, possibly even praiseworthy and was reflected in Julius Grodinsky’s *Jay Gould* (1957) and Maury Klein’s *Life and Legend of Jay Gould* (1986). Neither the “robber barons” viewpoint nor the “industrial statesmen” viewpoint, however, addressed the reasons for the emergence of big businesses. The attention given the leaders of big businesses rather than the businesses themselves led many researchers to seek alternative ways of viewing the era.

While some researchers sought explanations in quantifiable data such as demographics or econometrics, many other researchers sought to use social sciences such as sociology, economics, and organizational theories to study the big businesses without passing moral judgments on the leaders of the past (Porter, 2006). This type of research was particularly evident in business history and is best represented by the work of Alfred Chandler.

Chandler produced a prodigious amount of research beginning in 1962 when he published *Strategy and Structure* but he is best known for *The Visible Hand* (1977) in which he proposed that technological improvements were the driving forces in explaining the emergence of big businesses and that business enterprises were shaped by the nature and complexity of the tasks they performed. Chandler's conclusions have been challenged by other researchers who have looked elsewhere for alternative explanations for the emergence of big businesses.
Plan of the Study

The study consists of six chapters. The remainder of the first chapter is a presentation of the history of business. Knowledge of the history of business illuminates how extraordinary the emergence of big businesses was in the history of the evolution of business and capitalism. Business and capitalism are intricately related, however, capitalism is more than business; it is a cultural system and it was this system that created the environment for the rapid emergence of big businesses (Appleby, 2010).

Chapter two is a review of relevant research on big businesses. It begins with a review of writings on big businesses from the end of the nineteenth century to the early part of the twentieth century in which the leaders of big businesses were portrayed as “robber barons” and their businesses as having a negative impact on society in general (Porter, 2006). The study shows how writings in the 1950s changed to a positive view of big businesses and their leaders. The remainder of the chapter reviews the writings of Alfred Chandler and other researchers in the latter part of the twentieth century who wrote on reasons for the emergence of big businesses.

Chapter three is an explanation of the theoretical framework for the study as well as the hypotheses to be tested and the data sources to be used to test the hypotheses. The theoretical framework is derived from Marx’s general law of capitalist accumulation and Weber’s theory of economic rationalization. The hypotheses are presented as statements that explain the emergence of big businesses and their continuation during the second half of the nineteenth century. Taken together, they explain the emergence and continuation of big businesses.
Marx’s (1990 [1867]) general law of capitalist accumulation is an attempt to explain the impact of the growth of capital on the working class. Contained within his general law is his theories of the concentration and centralization of capitals. Marx’s theory on concentration of capitals contains his position of the growth of a single capital. His theory of the centralization of capitals is concerned with the acquisition of one or more capitals by another capital.

Weber’s theory of social action explains the reasons why individuals act as they do, including economic rational action (1978 [1968]). Economic rational action is taken when an individual is motivated by the desire for utilities, the real or imagined advantages of the possession of an opportunity for present or future economic use. Weber’s theories will be used to explain the processes big businesses used to maintain their dominant position.

The fourth chapter is case analyses of some of the most important big businesses that came into existence in the period of time analyzed in this study. The study examines the beginning of the businesses and the actions they took that enable them to become big businesses.

The fifth chapter is an analysis of the extent the hypothesis of the study were able to explain the reasons what businesses did to become and remain big businesses. The data was examined to contrast business characteristics prior to the Civil War and during the “big business era”. The information examined is related to the production and distribution processes of business as well as market control. The sources of the data included primary sources such as government and private repositories as well as published secondary sources.
The sixth chapter is a presentation of the results of the findings of the study. It contains a discussion that explains how Marx’s and Weber’s theories explain the actions taken by businesses that enabled them to become and remain big businesses during the latter part of the nineteenth century and why these developments were a unique phenomenon in the history of capitalism.

The History of Business

Trade, and even manufacturing, existed prior to historic times as shown by archeological study (Roberts, 2011). Residents of early communities had an economic aspect, as well as a religious aspect, as part of their social life while struggling for survival under conditions they did not understand and could not control. Their lives were basically equalitarian as essentials of life were communally owned and there was little opportunity for the creation of wealth (Polanyi, 1944).

The evolution of markets, a meeting place for the purpose of bartering, selling, or buying, was a significant advancement in the economic environment (Polanyi, 1944). The market allowed for prices to emerge, the result being the establishment of the economy as an institution and, as Polanyi posited, “society must be shaped in such a manner as to allow that system to function according to its own laws” (P. 60). The economy and society became linked with the link becoming increasingly complex as economic systems evolved. The beginning of this link began when the first true businesses developed in the early civilizations of the Fertile Crescent in the Ancient Middle East.
Ancient Middle East

Roberts (2011) attributes the beginning of business to the evolution of demographic concentration in the Fertile Crescent. The land was enriched by frequent floods and augmented by irrigation making possible the domestication of plants and animals to feed a large sedentary population. The existence of these large sedentary populations necessitated the creation of a social system to coordinate efforts of planting, harvesting, and storing food supplies. The first leaders were most likely priests who extended their traditional role as religious leaders.

The discovery of the means to create bronze led to innovations in weapon creation and the destruction of prehistoric equivalency of power (Roberts, 2011). The possessors of weapons used their advantage to acquire land and resources for themselves while at the same time extracting any surplus production from others by means of tithes, taxes, or rents.

The growth of cities created the need for goods that could not be locally produced (Roberts, 2011). As a consequence of this need, reciprocal trade developed between cities whereby goods in excess in one city could be traded to other cities that had a need for those goods and vice versa. These activities grew and by 3000 BCE there was a thriving trade in North Africa, the Middle East, and even into parts of Europe and Asia.

The volume of trade allowed for the creation of wealth among rulers and their designated trading agents (Roberts, 2011). The volume of trade also created a need for a means of trading other than by barter and a means of holding wealth. As a
consequence, money came into existence typically in the form of silver or gold. Another critical element of business, credit, also came into use.

Greece

The Greeks were not the first to have city-states or ply the Mediterranean Sea in trading ships (the Phoenicians had done so for almost three millennia) but they were the first to have money-based markets that gave entrepreneurial businesses a central economic position (Roberts, 2011). The Greeks were not able to grow enough surplus food for the city dwellers and as a result found it necessary to find other sources of food.

The Greeks were originally cultivators but the lack of productive land drove them to use the sea to supplement their agricultural produce (Cameron, 1989). In time, they established colonies throughout the Mediterranean Sea area as well as the Black Sea area. The colonies primarily served as sources of food products by also were used to relieve the pressure of excessive population in Greece. The development of maritime trade was necessary to move these goods.

The Greeks learned much of commercial activities from peoples in the Middle East with whom they had trading contacts including an alphabet, a linear sense of time, more efficient means of agriculture and animal breeding, irrigation techniques, and probably interest (Roberts, 2011). The Greeks did, however, add something new to business, coined money.

Coined money allowed for a rapid increase in trade as goods could now be valued in a standardized manner. Coins became an acceptable manner of payment for almost all commercial transactions (Roberts, 2011). As the denominations became
smaller, more individuals could use them, and as a result, commerce became more rapid and easier to facilitate. The advent of coined money also allowed for the accumulation of wealth in coins, credit, and trade inventories where previously wealth had been measured in the ownership of land, commodities, and slaves. As advanced in business practices as the Greeks had become, the Roman Empire advanced business practices even further.

Rome

According to Roberts (2011), “Roman business originated in war, flourished in peace, and floundered in disorder” (p. 133). The pinnacle of Roman business was during the period approximating the first two hundred years of the CE period when “fifty million people throughout the empire enjoyed a largely peaceful and orderly state with common languages, currencies, laws and customs, where a money-based market economy prevailed” (Roberts, 2011, p. 133). A similar common market would not appear again until the creation of the European Union in 1992 that could rival the size of the common market of the Roman Empire.

The long period of peace allowed Rome to develop business under most favorable conditions (Cameron, 1989). Rome had already absorbed economic achievements and institutions from the Hellenistic culture as well as the legal system from Greece. These were modified by Rome to allow considerable freedom of enterprise and allowed for strict enforcement of contracts and property rights and, in general, equitable settlements of disputes.
The economy of Rome was also bolstered by two innovations that had not existed in other earlier economies (Roberts, 2011). The Romans had a patronage system with a binding norm of relationships that allowed Roman businesses to transcend the family-based model of earlier times. The Roman system was also more meritocratic and allowed for a free flowing distribution of credit. The Romans also made extensive use of private businesses to perform work for the government to the point that the government was the primary customer of private business.

The confluence of a lengthy period of peace and the existence of institutions advantageous to business development allowed Rome to become the holder of most of the Western world’s wealth (Roberts, 2011). The position as the world’s leader in business did not last, however, as by the third century CE large manors ascended to primacy with their own sovereign powers. This development drained the central authority of Rome and its ability to rule the Western provinces leading to the institution of feudalism.

Medieval Europe

The fall of the Roman Empire left Europe without a central authority and ushered in a lengthy period of anarchy that resulted in the growth of self-sufficient estates and a decline in towns and interregional trade from the fifth to the fifteenth centuries CE (Cameron, 1989). The Frankish kings, the primary successors of political power in Europe, devised a system of military and political relationships to meet external threats from Muslims of North Africa and Vikings from Scandinavia. This system was also attached to an evolving economic system.
The manorial economic system had come into existence during the later Roman Empire (Cameron, 1989). The large farms of Roman nobles had evolved into economic self-sufficient estates with cultivators bound to the estate either by edict or by social pressure. The system was modified by later invasions which moved warriors into the ruling class. It was easy to attach the system of military and political relationships to the manorial economic system to form a relationship termed feudalism. Feudalism became the dominant feature of Europe in the Middle Ages and remained in existence for centuries.

The existence of self-sufficient estates did not mean the end of trade (Cameron, 1989). Italy, with the convenience of the Mediterranean Sea available for transport, continued trade with the Middle East and China. The victory over the Muslim raiders was so successful that Pisa and Genoa were able to command the entire Western Mediterranean area. Trade in other parts of Europe was more localized, however, there were traveling traders who obtained wares from Southern Europe and traveled circuits in Northern Europe to sell their wares.

Modern Europe

The 1400s CE was a period of time when great political change started to occur in Europe (Cameron, 1989). Europe had recovered from the devastation produced by the Great Plague of the 1300s CE as evidenced by a recovery in the overall population as well as the growth of cities. The first nation-state (England) came into existence and the Western World was contacted. Both events had a dramatic and lasting impact on
business operations and the extent to which business would become a central aspect of
life.

Nation-states developed an economic system to strengthen and enrich the state
which replaced the feudal system as the primary economic system (Cameron, 1989).
This economic system, deemed the mercantile system by Adam Smith (2012 [1776]),
functioned by “the encouragement of exportation and the discouragement of
importation” (p.367). Mercantilists, according to Hughes and Cain (2011), “believed that
international trade war was a zero-sum game; they believed in the necessity of
governmental regulation to maximize the wealth of a nation” (p. 4). The wealth of a
nation was typically measured in the precious metals it owned. This belief was a prime
driver of the race to colonize the Americas and acquire the precious metals found there
as well as other commodities.

Business in the English Colonies

The establishment of colonies in the Western hemisphere provided opportunities
for English businesses since they could import raw materials from the colonies and
export finished goods to them (Buder, 2009). England approached trade with their
colonies differently than did Spain and Portugal. Spain and Portugal essentially
exported the feudal system to their colonies, establishing plantations with their reliance
on servile labor and within an economic system that restricted trade and levied heavy
taxes which served to restrict the evolution of a commercial middle class. England
encouraged the use of joint-stock companies for trading with their colonies, the first
being successfully established in 1619. The shortage of labor also forced companies to
offer its laborers their freedom from indentured status after a few years' service to their employer. Many of the new inhabitants to North America arrived as free men.

Early joint-stock companies were soon replaced by government grants of land to individuals in return for favors (Blackford & Kerr, 1994). It was this type of business organization that dominated the colonial economy. Trade was primarily with England with primary exports being tobacco and food grains. The vast majority of income and spending, however, was local.

The manufacturing of the era was limited due to the cost of transportation and generally consisted of production for local consumption (Blackford & Kerr, 1994). There were many items manufactured including textiles, small metal goods, milled food products, milled lumber, and rum. The only manufacturing for export purposes was for shipbuilding and iron production.

Business in Early America

A second revolution that mostly preceded the American Revolution was the Industrial Revolution (Cochran, 1981). The Industrial Revolution began in England as new types of equipment were used to increase production and lower costs. The use of new technology for production was not new as technological changes in production methods had occurred prior to the late 1700s CE, but they were primarily concentrated in the rural areas and primarily involved the production of textiles (Cameron, 1989). The English use of new forms of equipment, however, coincided with the movement of many people to cities thus providing a workforce to use the equipment. There were two important innovations in the early 1700s CE which were fundamental to the advances in
industrialization: the process for smelting iron with coke and the invention of the steam engine. Major improvements to the steam engine were made by James Watt in the 1760s CE which enabled the use of the steam engine to mill flour and spin cotton. A third invention, critical to the cotton industry in the Southern United States was the cotton gin which was invented by Eli Whitney in 1793.

Business in the United States had the appropriate viewpoint of economic activity and a growing ability to use new equipment for production but more was needed to provide an impetus to business, business needed property rights (Hughes & Cain, 2011). The American Revolution, as Hughes and Cain (2011) noted, “was not against the law” (p. 132) but a particular alien authority. The law that would come into existence was civil law, “and it was at least as responsive to business’s needs as the common law during the Industrial Revolution” (p. 133).

There were two dynamics occurring that appeared to be an impetus to the spread of business (Blackford & Kerr, 1989). One dramatic change was the increase in the area of the United States. The United States increased in size from approximately 890,000 square miles in 1783 to almost three million square miles by 1853 (Hughes and Cain, 2011). In addition to the United States growing in size, it was also rapidly growing in population (Blackford & Kerr, 1989). In the period of time from 1776 to 1860, the population increased from about 2.5 million to over 31 million. These phenomena, when combined with other factors conducive to business expansion, could expand business, given the right circumstances.

Given the great territory of the United States, it would be difficult to expand business without adequate means of transportation and communication so it should be
no surprise that the construction of roads was one of the first internal improvements Americans made in the early nineteenth century (Blackford & Kerr, 1994). The primitiveness of the early roads made another means of transportation, the waterways, a preferential choice for the movement of goods and people. The invention of the steamboat advanced the attractiveness of water transportation as now it would be possible to move upriver as well as downriver. The use of powered boats provided important new business opportunities in the nation’s interior. It also provided business opportunities for their owners including the first of the “tycoons”, Cornelius Vanderbilt (Stiles, 2010). The number of steamboats grew from only seven in 1815 to 817 in 1860 (Hughes & Cain, 2011).

Natural waterways had their limitations as business had to go where they existed. The logical solution to the problem was to build canals where transportation was needed. The first major canal, the Erie Canal, was operational by 1825. By 1840 over 3,000 miles of canals existed in the United States (Blackford & Kerr, 1994). The bulk of goods shipped by canals were of local origin, either agricultural or milled goods. Canals were located in the Eastern United States since it was not practical to build them in areas farther west. Canals were a major advance in transportation but their era as the transportation of choice was short as they were in a rapid decline by the late 1840s.

It would appear that all the necessary components were in place to have a rapid expansion of business by the 1850s and indeed business did expand, both in numbers and geographically. This was evidenced by the existence of thousands of specialized merchant establishments by the mid-1800s (Blackford & Kerr, 1989). Almost all were small and no single firm was in control of a field of business. The output of the
production that existed was small enough for merchants to handle directly and technologically simple enough for them to sell and service themselves.

The improvements in transportation facilitated the growth of the first modern businesses, the railroads (Micklethwait & Wooldridge, 2005). The miles of railroads in operation grew dramatically from only 23 miles in 1830 to over 30,000 miles in 1860. They were concentrated in the Eastern United States where they eventually replaced canals as the preferred means of transportation for most products. Although railroads were the first modern business, there were not big businesses in the 1840s. The number of railroad companies in 1840 numbered over three hundred but, on average had only thirteen miles of track (Buder, 2009).

The Big Business Era in America

In the 1850s, the United States began developing a dual economy, one that consisted of industries dominated by big businesses and one with industries existing at the periphery that consisted of smaller firms (Blackford & Kerr, 1994). The first industry to develop large organizations was the transportation industry and the railroads were the big businesses of this industry.

The early railroads were very competitive and many failed due to the intense competition between themselves and with the canals (Frank & Dowd, 2000). The railroads were not able to compete with the canals due to the expense of building and maintaining their small lines. There was an additional problem as a lack of common track gauges made traveling by rail a burdensome adventure for early travelers and for those businesses that shipped their merchandise by rail.
The impetus for the consolidation of railroads prior to the Civil War came primarily from state and local government entities (Buder, 2009). Government entities, especially state and local governments, had been instrumental in financing railroads from the beginning of their existence as they had the building of canals before and during the early era of railroads (Cochran, 1981). The assistance came in the form of charters, tax abatements, and eminent domain grants which enabled the railroads to form. The competition among them, however, caused many to fail and the government entities acted to limit competition by limiting their support to fewer railroads.

The beginning of the American Civil War greatly accelerated the consolidation of railroads as there was a need to minimize time involved in shipping and remove competition so as to guarantee the survival of the needed railroads (Botti, 2006). The federal government, in effect, chose the winners in the competition for survival among the railroads by contracting with some railroads, thereby guaranteeing them business and income. As Richard White (2011) notes, “The Civil War probably destroyed more railroads than it built, but it contributed a great deal to the organization of railroads and even more to the creation of financial and governmental institutions that would in the years following the war breed railroads like rabbits” (p. 3).

The Civil War, with the defeat of the South, ended what Buder (2008) referred to as “the most formidable ideological challenge to the advance of untrammeled industrial capitalism in American History” (p. 120). The North and West entered a period of economic growth based on supportive cultural values and with support from federal legislation and actions. In the ten years after the end of the Civil War, national industrial
output increased 75% and railroads were “at the heart of this business expansion” (Blackford & Kerr, 1994, p. 132).

Railroads were America’s most important industry during the period of time after the Civil War until 1900 (Buder, 2009). Capital investment in railroads increased from $2.5 billion in 1870 to $10 billion in 1890 by which time fully 25% of the nation’s wealth was in railroads. The number of miles of rail lines increased from approximately 30,000 in 1860 to over 200,000 by 1900. Railroads consumed 80% of the steel produced in American steel mills. Trading in railroad securities dominated Wall Street’s investment bankers and railroads were nine of the eleven companies in the original Dow Jones Industrial Average in 1884.

The federal government became active not only in the railroads of the East and Midwest but also the transcontinental railroads during the Civil War. The Pacific Railroad Act of 1862 authorized the building of a railroad that would connect Nebraska to California. The act gave land grants to the railroads of ten sections per mile, later increased to twenty sections per mile. This was primarily done as an enticement to attract private investors into what many considered a risky endeavor and was justified by the federal government asserting that railroads were common carriers and as such, public utilities. The federal government also loaned funds to the railroads and backed their bonds. The federal government, by the end of the Civil War, had granted six million acres and loans of $65 million to six railroads to link the Pacific region to the rest of the country. There was actually very little construction on these railroads during the Civil War but they would become a major concern of the federal government after the war.
The effectiveness of the railroads organizational structure and processes was not lost on other businesses which were also growing in size at the same time as the railroads (Blackford & Kerr, 1994). The railroads, in the view of Blackford and Kerr (1994), “became the first businesses in the United States in which the visible hand of management replaced the invisible hand of the market. What the managers of railroads decided to do became more important than market forces in determining what happened on the railroads” (p. 132).

The consolidation of railroads in the East continued during the Civil War (Gordon, 2004). The private sector became a part of the consolidation process when Cornelius Vanderbilt took control of the Harlem Railroad in 1863. Vanderbilt continued consolidating railroads, eleven in all, and by 1870 had formed the New York Central. The railroad had 4500 miles of track and branched from New York to Albany and then to the Great Lakes. The consolidation continued after Vanderbilt’s death when J. P. Morgan bought the New York Central from Vanderbilt’s son and tasked himself with bringing order to the railroad companies, either directly by mergers or by pressuring them to act together to coordinate fares and rates. Morgan controlled one-sixth of the nation’s railway systems in 1890. In 1900 there were only six huge railway systems in the entire country, all controlled by Wall Street Banks who, in turn, were controlled either by Morgan or the banking institution of Kuhn, Loeb.

Railroads were connected in some manner to almost all of the large industries dominated by big business after the Civil War especially the steel industry (Buder, 2009). The vast railroad expansion after the Civil War consumed most of the steel produced in the United States. The result of the demand for steel by the railroads
resulted in steel production increasing from 70,000 tons in 1870 to over 4 million tons by 1890 (Blackford & Kerr, 1994). The steel industry was also the first major production industry to restructure itself to facilitate increased production and cost reduction.

The changes in the steel industry were not by chance as the trailblazer for the changes, Andrew Carnegie, had worked for the railroads early in his career (Micklethwait & Woolridge, 2005). Carnegie took the methods of management the railroad used and applied them to steel manufacturing. He introduced a “line production” system, arranging machines and workers into a sequence that allowed jobs to be broken down to the component level. He also standardized operations to exploit advantages of scale. By 1890, a dozen men could produce as much steel in a day as had an entire plant in 1850.

Carnegie’s company was also one of the earliest and largest companies to vertically integrate the source of his raw materials. This integration included iron mines and coal mines. The integration also included ships and railroads which were used to ship raw materials and coal to his plants as well as finished products to his customers (Buder, 2009). Carnegie also spread his customer base to include building construction and shipbuilding when the railroads demand for steel decreased.

Carnegie used his commanding positon as the largest and lowest cost producer to force other owners of steel companies to either sell to him or he would use his company’s position to force them out of business (Morris, 2005). The power he commanded as the owner of the largest steel company in the world was also augmented by his ownership of the largest source of raw iron ore and coke. Carnegie
was not above colluding with other producers when it came to contracts and prices, either in raw or finished materials.

The industry most associated with the use of horizontal organization was the oil industry (Blackford & Kerr, 1994). The oil industry growth, like that of steel, was explosive, emanating from the discovery of oil in Pennsylvania in 1859 and an early rapid growth in the East and Midwest. The use of coal oil rapidly replaced whale oil and candles as a means of creating light.

The man most associated with the early era of oil was John D. Rockefeller (Blackford & Kerr, 1994). He entered the oil refining business in 1863 and by 1867 owned a large refinery near Cleveland, Ohio. The oil refining industry quickly became saturated with competitors, forcing prices down and causing disruption of business operations. Rockefeller’s solution to the problem was to have the producers collude to bring order to an unstable, highly competitive business situation. The advent of "Horizontal integration sought to lessen competition, thus reducing the risks to the capital invested" (Blackford & Kerr, 1994, p.141).

The vehicle Rockefeller and his competitors used as a means of horizontal integration of the industry was the trust. The companies turned the stock of their companies over to the trust, Standard Oil Company, which operated the companies in a manner to avoid competition. The trustees of the trust would then divide profits among the companies based on the perceived contribution of the company to the trust. The vehicle was highly successful, as by 1890 the trust controlled 90 percent of the petroleum capacity of the United States.
The Transition from the Big Business Era

The end of the “big business era” was not the end of big businesses rather it was an end to an era when big businesses were virtually unchallenged by government (Blackford & Kerr, 1994). Events occurred in the late nineteenth century and the early twentieth century that heralded the next step in the evolution of business including the creation of the holding company and the intrusion of the federal government in business operations.

A number of factors have been posited for the reasons of the transition from the “big business era” (Porter, 1973). One of the reasons was the change in attitude toward big business by the public (Blackford & Kerr, 1994). The early admiration of the big business and their leaders had begun to transform to a negative perception as they were often blamed for financial panics and recessions. Much of this attitude change was due to the proliferation of information by the rapid increase in the number of new papers and magazines.

The political climate was also changing as Congress began to set limits on the actions of railroad by creating the Interstate Commerce Commission to regulate railroads (Blackford and Kerr, 1994). Congress also passed the Sherman Antitrust Act in 1890, another effort at assertion of control over big businesses. The impetus to this act was the question of the impact big business was having on the American traditions of democracy and liberty.

Supreme Court decisions in 1897 and 1898 expedited the creation of holding companies to replace trusts. The court’s decisions went against the existence of trusts as a means of big businesses owning other businesses but supported the legality of big
businesses. The result was the creation of holding companies, the first being created in Delaware in 1899. The creation of holding companies proved fortuitous for investment bankers in the 1890s that were searching for investment opportunities to offset the decline in the railroad industry. The investment bankers played a large role in the merger actively between 1897 and 1904 which resulted in the consolidation of 4,227 firms into 257 holding companies. By 1904, the largest 318 holding companies owned 40 percent of the country’s’ manufacturing capacity.

Organized labor also began to assert itself as a power in the organization of businesses. (Kimeldorf, 2013). The traditional view of labor by leaders of big businesses had been that their position gave them the right to be unencumbered by employees. This perception was upheld by legal authority as the “employment at will” doctrine reigned and held that actions of joining a union, striking or boycotting could be interpreted as unlawful constraint of trade. Despite these roadblocks, unions did exist and there were more strikes and persons injured or killed in the United States between 1876 and 1896 than in any other nation. These activities led to the founding of the American Federation of Labor in 1886.

Clearly, the advent of the large and frequently monopolistic or oligarchical businesses of the post-Civil War period was a new and dramatic development in the history of business and capitalism. They were not only radically larger and more geographically widespread than any other type of business that preceded them but they also operated differently. The techniques of organizational dynamics they developed to effectively manage their large and dispersed organizations were innovative and have proven to be an enduring legacy of their creation.
CHAPTER 2
LITERATURE REVIEW

There have been many explanations given for the emergence of big businesses in the United States during the second half of the nineteenth century. It is possible, however, to classify most of the reasons given into four categories: technological, political factors, competition, and organizational. Theories in each of these categories will be reviewed; however, it should be noted the earliest writings on big businesses were not directed at explaining the cause or causes of the emergence of big businesses but rather were attacks on big businesses and their leaders. These writings reflected the “robber barons” concept of the men and the companies they managed during the post-Civil War era (Bridges, 1958). Although these early writings are not considered research oriented, they do address topics associated with big businesses that would be addressed in later research and writings on big businesses. A review of writings that reflected the “robber baron” concept of big businesses is therefore justified based, not on what it added to the research literature on the emergence of big businesses, but rather as an introduction to many of the topics that would later be addressed in research on big businesses.

The Robber Barons Perspective

The origin of the concept of “robber barons”, according to Hal Bridges (1958), can be traced to an article published by E. L. Godkin in 1869 in the magazine The Nation. In the article, Godkin (1958) referred to Cornelius Vanderbilt as “a lineal successor of the mediaeval baron that we read about” (p. 1). The reference to
Vanderbilt came to be used as a description of leaders of big businesses that existed from the beginning of the American Civil War to about 1900. According to Bridges (1958), the view of leaders of big businesses was that they were “avaricious rascals who habitually cheated and robbed investors and consumers, corrupted government, fought ruthlessly among themselves, and in general carried on predatory activities comparable to those of the robber barons of Medieval Europe” (p. 1).

Bridges (1958) noted the first book written about the “robber barons” and the means they used to create their big businesses was Henry Demarest Lloyd's *Wealth against Commonwealth* (1894). According to Bridges (1958), Lloyd's "impassioned rhetoric of this book was aimed not only at the Standard Oil monopoly but at an even bigger target—business, the capitalistic system as it then existed" (p. 2). Lloyd had a negative view of business in general and wrote that business “colors the modern world as war reddened the ancient world” and declared if civilization were to be destroyed it would be by “barbarians…from above…who now exercised powers kings do not know” (p. 2). Lloyd’s work has been disparaged by most historians but it “served to fasten a robber baron portrait of the postwar businessman in to the American mind” (p. 3).

Another writer, Ida Tarbell, wrote very much in the same manner as Lloyd about big business and she, like Lloyd, specifically targeted John D. Rockefeller’s Standard Oil Company (Adelmann, 2010). The theme of her book *The History of Standard Oil Company* (1905) served to reinforce the view Lloyd had put before the American public that “these soulless industrialist robber barons were a destructive force and were willing to circumvent laws to accomplish their personal selfish ends” (p. 25).
The concept of “robber barons”, however, only moved into the lexicon of the general public with the publication of Matthew Josephson’s *The Robber Barons* in 1934. Josephson (1934) proposed the robber barons built their businesses when they “overran all the existing institutions which buttress society… took possession of the political government (with its police, army, navy), of the School, the Press, the Church; and finally …the world of fashionable or polite society” (p. 316). Josephson was a critic, though certainly not the first or last, of the methods the “robber barons” used to create their business empires.

There were two attempts by groups of writers in the early twentieth century to counter the “robber barons” perspective of leaders of big businesses (Nelson, 1996). The first attempt, led by N.S.B. Gras of Harvard Business School, focused on showing how businesses operated using case studies with detailed descriptions. The efforts were short-lived, however, as the onset of the Great Depression and the publication of *The Robber Barons* (1934) by Josephson caused the public to again perceive big businesses as evil entities and causal factors of the Great Depression.

The second attempt by writers to counter the “robber barons” perspective of big businesses was led by Allen Nevins (Nelson, 1996). Nevins wrote biographies of prominent industrialists, including John D. Rockefeller and Henry Ford, chronicling their life and times. Nevins most famous book, *The Heroic Age of American Enterprise* (1940), was an attempt to refute the perception of the industrialists of the big business era as presented by Josephson and other “Robber Baron” writers. The effect of his work, however, according to Nelson (1996) was to “ironically… legitimate Josephson’s work” (p. 6).
Technology

Technological theories of the emergence of big businesses present the thesis that technological innovations and inventions used in the production of goods and services made possible large organizations and determined their structure (Perrow, 2002). Noble (1977) asserted “The notion of technological determinism has dominated popular understanding of the industrial revolution…Whether they have been trying to account for the rise of large-scale industrial units…or changes in ethics, historians commonly have alluded to the demands of modern technology as a causative factor” (p. xviii). The primary reason for the choice of technology as a causative factor was its use to lower average variable costs (High, 2011).

The businesses of the United States prior to 1825 was primarily trade, real estate, and building construction with very little capital invested in manufacturing equipment (Cochran, 1981). As Cochran (1981) noted, “while the financing of building construction became easier, there was little progress in its technology during this period except for Perkin’s invention of factory cut nails and the greater use of power sawing” (p. 51). The cost of food in the United States was cheaper than the cost of food in England giving Americans more purchasing power, a disincentive to the mechanization of businesses to lower costs. The lack of a need to lower costs also meant businesses could quickly meet new demand without the need to acquire capital for investments in expensive and complex equipment.

The adoption of newer means of mechanical production was primarily limited to only one industry in the early nineteenth century United States, textile manufacturing (Licht, 1995). The earliest manufacturing factories were also created to produce textiles
using carding, spinning, and weaving machines, primarily using young women from the surrounding countryside as labor. Licht's (1981) position was that manufacturing in the United States developed unevenly during the 1830s and 1840s. In some locations, such as Lynn, Massachusetts, the increase in production of textiles was due to increases in the size of workforces, not investment in newer and better technology. The increase in production of textiles in Lowell, Massachusetts, however, was due to the adoption of mechanized equipment. The Lowell system, Licht (1981) acknowledges, "remained exceptional" (p. 28).

Porter (2006) also wrote "American producers were slow to adopt both steam technology and the advances in iron making" (p. 32). However, by the close of the 1850s, "the American economy was well launched into industrialization and rapid, sustained growth" (p. 33.). Porter continued "The national march toward mechanized production and the spread of factories did not, however, immediately trigger the appearance of big business in manufacturing. For many years thereafter, business continued to be done in single-plant operations, ownership of individual units was still concentrated among small numbers of people, ownership and management still customarily went hand in hand" (p. 33-34).

Railroads played a central role in many theories of the relationship of technology to the emergence of big businesses and are considered by many historians and researchers to have been the first industry to be a big business (Porter, 2006). High (2011) particularly noted the role railroads had in lowering the costs of obtaining supplies and delivering goods over long distances. The importance of the railroads to the United States was greater than other countries due to the United States large and
geographically dispersed population. High’s (2011) contention was that the railroads made possible the development of big business as “the sharp reductions in shipping costs created a national market and the opportunity for firms to exploit economies of mass production” (Ayala, p. 87).

William Roy (1997) echoed Ayala’s position in his book *Socializing Capital: the Rise of the Large Industrial Corporation in America*. Roy’s (1997) belief was that “No economic sector was as important to the rise of large American business corporations as the railroad…the importance of the railroads is unparalleled and undisputed” (p. 78). Roy (1997) proceeded to posit “railroads constructed the foundation of the American corporate institutions” and “virtually all accounts agree the railroad was the dominate factor in the development of the nineteenth century American economy” (p. 78).

Walter Licht (1995) also theorized the development of railroads was “essential” to the emergence of big businesses in his book *Industrializing America: the Nineteenth Century* although he did note “a growing market and available investment funds are two basic elements in the rise of big business” (p. 163). Licht (1995) viewed these as necessary predecessors to the railroads although it was the railroads that “extended the geographical range of the market and allowed market activity to expand” (p. 163).

John Micklethwait and Adrian Wooldridge (2005) asserted in their book *The Company: A Short History of a Revolutionary Idea*, the necessity of railroads for the emergence of big businesses. In their opinion, “The railroads were not just great enablers for modern business; they were also the first modern businesses” (p. 60). Micklethwait and Woolridge also wrote, “Railroads had equally little chance about being the first firms to employ large armies of full-time managers” (p. 60).
Alfred Chandler (1977) considered the existence of railroads as a precondition to the emergence of big businesses in his theories. Although the primary causal factor in the emergence of big businesses in Chandler’s theories is organization structural changes, he nevertheless wrote these changes could not occur “until the nation’s first railroad boom which began in the late 1840s and 1850s” (p. 82). The success the railroads had during the first railroad boom, as Chandler (1977) noted, did not occur until “a small number of large, managerially administered enterprises replaced a large number of the small personally run transportation, shipping, and mercantile firms” (p. 111).

Buder (2009) concurred with Chandler’s position on the importance of railroads in the emergence of big businesses but also acknowledged the early railroads only became successful when “requirements of safety and efficiency prompted innovations” (p. 107). The early railroads only became big businesses when the numerous small railroads merged to form large ‘trunk’ lines. The expansion of the railroads, he noted, necessitated “considerable assistance from state and local governments” (p. 108). In addition, the federal government “provided handsome grants of public land to support interstate and then—after the Civil War—the great transcontinental lines” (p. 108).

Theories that technology explained the emergence of big businesses do not appear to offer a demonstrable explanation for phenomenon. There is no direct association between any technological invention or development or any combination of technological inventions or developments that could be construed as a valid explanation for the emergence of big businesses. It would appear instead that “Technological
change is not an independent variable, a self-propelled social engine; quite the reverse, it is a dependent variable propelled by a host of other factors” (Cowan, 1997, p. 63).

Political Factors

Theories of political explanations of the emergence of big businesses are exemplified by that of Richard Franklin Bensel (2000) who posited in his book, *The Political Economy of American Industrialization, 1877-1900*, that “an overlapping set of government policies … permitted both aggressive popular claims on wealth in electoral politics and high levels of capital accumulation and investment in industry” (p. xviii). Although he was specifically speaking of the Republican Party, theories of political involvement and support of businesses as the explanation of the emergence of big businesses is echoed in the work of many researchers. While some researchers view political support as a facet of the emergence of big businesses, there were others who viewed this action by all levels of government as the primary reason for the emergence of big businesses.

Hughes and Cain (2011) posited foundations of a political environment conducive to the emergence of big businesses were contained in the American Constitution. The Constitution contains the right of inheritance, several real property rights, contracts, and the right of eminent domain which, although not used extensively by the Federal government until after the 1860s, was used extensively in early America by local and state governments. The form of ownership prescribed by the Constitution was, according to Hughes and Cain (2011), “almost ideal as the base for a free-market economy” (p. 133).
The broadest power concerning business in the United States is the Commerce Clause in the Constitution which gives Congress the power to regulate commerce with nations, among the states, and with Indian tribes (Hughes and Cain, 2011). The dominion of the clause was extended in 1824 when the Supreme Court determined in Gibbons v. Ogden that the clause gave Congress the power to regulate commerce between states. This decision would prove to be advantageous to the builders of roads and canals, and eventually railroads, which would cross state boundaries.

Governments at all levels were also directly involved in financing business ventures by the early 1800s. After the American Revolution, it became obvious to the leaders of the new government that improvements in transportation were needed for economic as well as individual needs. The availability of sea transportation and inland waterways had to be augmented by other types of transportation. The leaders of the new country proposed the federal government sponsor the building of public roads and canals, however, as Ruth Schwartz Cowan (1997) notes, “the federal program evolved into a uniquely American partnership between local governments, and private business” (p. 97).

Buder (2009) posited that private enterprise, rather than the federal government, was the primary leader in the construction of roads and canals in the early nineteenth century America and made “a difference important in shaping the rise of American enterprise and its corporations” (p. 71). He did note, however, “the amount of capital required for such ambitious projects forced the canal companies to turn to state and local governments for assistance in buying their stocks and bonds” (p. 71). State
governments invested over $100 million in canals between 1815 and 1860, an amount which constituted 80 percent of the total cost of their construction (Buder, 2009).

The canal companies, even with the assistance of local governments, were less than successful (Blackford and Kerr, 1994). The largest canal project, the Erie Canal, was successful because of its location and early construction, both financially and as an improvement in transportation. The project was an anomaly among canal projects, however, as most did not create enough income to meet capital and maintenance costs. Most of the canals were short in length, had competition from other canals, and were eventually abandoned. More miles of canals were abandoned than built by 1850 as the canal companies succumbed to the railroads which could provide transportation to areas the canals could not reach and could operate year-round (Buder, 2009).

The railroad industry is presented by many researchers as containing the first big businesses (Blackford & Kerr, 1994; Botti, 2006; Buder, 2009; Gordon, 2004; Micklethwait & Wooldridge, 2005). The railroads, very early in their existence, were also recipients of government assistance although this arrangement did not last very long. As Porter noted in The Rise of Big Business, 1860-1920 (2006), “In the financial sphere, the railroads presented problems on a scale never faced before in the United States…during their construction in the 1830s, railroads, then a wholly new form of transportation, had relied on heavy financial aid from state governments” (p. 34).

The lack of local and state governments to fund the enormous costs of the railroads meant new sources of capital had to be found (Porter, 2006). The miles of railroad more than tripled from 1850 to 1860 increasing from 9,000 to more than 30,000 miles. The capital to fund this rapid expansion came from the sale of railroad stocks
and bonds to investors, a large proportion of them sold in England. The stocks and bonds were listed on the New York Stock Exchange and investment-banking houses emerged to market the new investment instruments. The result of these financial arrangements made New York City the principal center of American railroad finances.

The federal government became involved in the railroad industry before the Civil War after refraining from supporting transportation for over two decades (Blackford & Kerr, 1994). The only significant deviation from this policy was a small appropriation for telegraph lines between Washington and Baltimore in 1844. In 1850, however, the federal government gave federal land to the states of Mississippi, Alabama, and Illinois so they could in turn give the land to a railroad company. The railroad company then used the land to back its bonds which furnished the capital to build a railroad from Chicago to Mobile. As Blackford & Kerr (1994) noted, “In effect, the federal government underwrote the original capital costs of the Illinois Central” (p. 109). The precedent of the federal government granting land grants to railroads had now been established.

The railroads rapid growth in the 1850s was not fueled by local and state governments support, although local and state governments did assist railroads with tax abatements and land grants, but rather by large investments from Europe (Buder, 2009). Even with the increased investments, the railroads would not have been successful had they not merged small railroads to form “trunk” lines which eliminated the downward pressure on profits due to competition.

The Civil War provided a greater stimulus to business than any other event in the history of the young United States (Botti, 2006). The federal government turned to private firms for war munitions and supplies which, according to Botti (2006), “gave an
indispensable stimulus to small and medium-size businesses” (p. 110). The amount of capital needed to fund the purchases was such that the federal government turned to the banking house of Jay Cooke & Company to be the agent for over $2.5 billion in bond issues. Cooke used a novel concept for the time, selling the bonds to individuals of all economic backgrounds rather than using large institutions and wealthy investors.

The true impact of the Civil War on the emergence of big businesses, according to theorists of political explanations of big business, were not the expenditures made during the war but the legislation passed by congress during the war (Licht, 1995). Although the federal government remained weak during this period as compared to the last years of the nineteenth century, there were some federal policies enacted during the Civil War that had the overall effect of promoting business (Blackford and Kerr, 1994).

The most visible legislation, and the one with the most impact on United States business, was the Pacific Railroad Act of 1862 (White, 2011). The concept of a railroad connecting the Mid-west with the Pacific area had existed since California became a state in 1850 but was fueled by the Civil War and intense lobbying by individuals interested in building the railroads. Congress passed the Pacific Railroad Act of 1862 after intense lobbying by the Governor of California Leland Stanford and California businessman Collis P. Huntington. The legislation allowed the federal government to give land grants to the railroad company for access to build and finance the construction of the first transcontinental railroad (Botti, 2006). The justification for land grants given to the railroads, as well as direct funding, was the need to preserve California and the
West for the Union. However, only a few dozen miles of rail was laid before the end of the Civil War (White, 2011).

The federal government ultimately gave grants of 13 million acres, plus $65 million in loans, to six railroads to link the Pacific region with the rest of the country. The two railroads that were built to connect the Union to the Pacific region, the Union Pacific and the Central Pacific, were connected in 1869 during a famous ceremony at Promontory Summit, Utah (White, 2011). By 1873, however, the Union Pacific was on the verge of bankruptcy, saved only by the deceitful activities of Jay Gould, while the Union Pacific, also on the verge of bankruptcy, was saved by similar efforts on the part of Collis Huntington. The near failure of the Union Pacific, which took down the House of Cook, precipitated the panic of 1873. The railroads, which had heavily depended on the federal government for direct assistance and political support, began to go bankrupt at a rapid pace without that support. In less than two years, from 1873 to 1875, over one hundred and twenty railroads went bankrupt defaulting on over $500 million in outstanding bonds.

The Homestead Act of 1862, enacted by Congress during the Civil War, has been presented as evidence of government as a causal factor in the emergence of big businesses (Hughes & Cain, 2011). The agricultural movement west was of two types, the family farm of the North and the plantation of the South. The family farms lacked sufficient labor and became more capital intensive over time while the southern plantations became labor intensive. The Southern plantation system was destroyed by the Civil War and the subsequent sharecropping system was largely unsuccessful. The
northern family farm increased output, although at a small pace. In both situations, the impetus was to move west where free land was now available.

The reality is the Homestead Act of 1862 did little to increase business (Hughes and Cain, 2011). The amount of free land was limited, therefore making farms small without any option, short of purchase, of increasing in size. As Hughes & Cain (2011) noted, “From the end of the Civil War until 1910, the major source of the increase in total output was simply the increased land input” (p. 303). Rapid increases in output per acre for corn and wheat did not occur until 1970.

A third major federal law enacted during the Civil War, and presented by some theorists as a causal factor in the emergence of big businesses, was the 1863 Banking Act which created national banks and forced unregulated private lenders into state jurisdiction (Hughes and Cain, 2011). The law, with its subsequent revisions, did force a rationalization of currency by putting banks under national charter (or state jurisdiction) and followed this action by issuing a national currency with status as legal tender for all payments except customs. It also forced the banks to have minimal capital requirements based on the size of the city in which the bank was located.

One intended change of the legislation was to force state banks into the federal system due to fees on bank notes held by state banks (Hughes and Cain, 2011). The unregulated institutions, acting in their own best interests, were making it difficult for the federal government to raise funds at the beginning of the Civil War. The unregulated intuitions were also a favorite lender of choice by businesses due to the lack of restrictions.
The legislation failed, however, to eliminate the state banks and move the entire United States to a federal banking system (Hughes & Cain, 2011). The state banks started making loans on demand deposits, a situation which greatly benefited businesses. The number of state banks rapidly increased and by 1914 held assets equal to that of federal banks and outnumbered them two to one. The banks not only increased in number but also became more “commercialized in all aspects’ (p. 388). The law also had the effect of concentrating financial power in New York City (Blackford & Kerr, 1994).

The evidence presented appears to invalidate political action as a causal factor in the emergence of big businesses. There were definitely attempts by government at all levels to help businesses in the early to mid-1800s. Some of the first attempts were by local governments and state governments that financed the construction of canals. The information presented, however, shows the canals, with a few minor exceptions, were unsuccessful. The canals were only successful after they were consolidated, thus reducing competition and enabling them to raise prices.

The legislative acts of the federal government during the Civil War were not shown to be a factor in the emergence of big businesses either. The grants and funding to railroads, especially the Union Pacific and the Central Pacific, only supported the railroads for a short amount of time before both almost succumbed to bankruptcy, saved only by deceitful means on the part of powerful businessmen. The problem, as with the earlier railroads, was overbuilding which lead to competition that did not allow any of the railroads to prosper. As with the early railroads of the 1800s, the solution was consolidation of the railroads after many were forced into bankruptcy.
The attempted creation of a central banking system was not successful either as state banks found the means to lend to businesses for their growth only after circumventing the restrictions the federal government had put into place. In addition, the law had the unintended effect of concentrating the nation’s financial system in one city.

**Competition**

Classical and neoclassical economic theories, according to Roy (1997), focused on “the invisible hand of the market to describe how the independent decisions of the individual buyers and sellers collectively determine what products will be produced, what technologies will be adopted, and what kinds of firms will thrive or wither” (p. 7). Businesses, however, do not act in isolation; they are impacted by, and impact, other businesses in the market, especially those that are competitors. As High (2011) noted “There is no doubt that competitive behavior and its effects grew more complicated with the rise of big business” (p. 91).

The American view of the world in the latter part of the nineteenth century was heavily influenced by the work of Herbert Spencer and William Graham Sumner (Morgan, 1993). Competition, in the view of Morgan, was “a law of nature…economic competition is associated with the move from status relationships (of feudalism) to the contract relationships of modern capitalism…the outcome of competition will always be inequality” (p. 581). Spencer and Sumner’s views of competition were popular among the business elite as it justified actions they took in conducting their businesses. These
changes in the ways of conducting business influenced some theorists to examine 
competition as more than simply a business relationship.

According to Mary Morgan (1993), there are three preeminent theorists of the 
role of competition in the emergence of big businesses, each of whom discussed 
competition as an institution. As Morgan notes (1993), “Instead of the duality of perfect 
competition and monopoly, they believed in a continuum of competitive behavior: 
between many firms, between few firms, and by monopolies. Instead of the passive 
noncompetition exhibited by both ‘perfectively competitive’ firms and monopolists, 
American economists observed and analyzed both the active competition of firms 
across the spectrum and the changing nature of competitive behavior over time” (p. 
566-7). The most famous of these theorists was Thorsten Veblen.

Veblen wrote two highly regarded books on business and society, The Theory of 
the Leisure Class (1899) and The Theory of Business Enterprise (1904); however, his 
 writings on competition are to be found in his second work. This work, according to 
Morgan (1993), was a presentation of Veblen’s idea that “competition and the other 
institutions associated with it are inextricably linked with … the modern industrial 
economy and the development of the machine process” (p. 575).

Veblen’s (2013 [1904]) view of competition was that “competition that has to be 
met is one of the factors to be taken account of in determining what the traffic will bear; 
competition may even become the most serious factor in the case if the enterprise in 
question has little or none of the character of a monopoly (p. 31). He continued “But it is 
very doubtful if there are any successful business ventures within the range of the 
modern industries from which the monopoly element is wholly absent” (P. 32).
Veblen posited that competition drives the efforts of the business leaders to "gaining control of some large portion of the industrial system“ (p. 20). He also noted that once the business leader has control "it may be in his interest to make and maintain business conditions which may facilitate the smooth and efficient working of what has come under his control" (p. 20-1).

Veblen (2013 [1904]) recognized business operations in the era had changed as they had consolidated into large business organizations "and the evident good effects of this work in the way of heightened serviceability and economies of production are pointed to as the chief and characteristic end of this work of reorganization" (p. 23). Veblen (2013 [1904]) believed this knowledge was so evident that it needed no further explanation. What he did want to explain was that “A theory of the modern economic situation must be primarily a theory of business traffic, with its motives, aims, methods, and effects” (p. 8).

According to Veblen (2013 [1904]), “The material framework of modern civilization is the industrial system, and the directing force which animates this framework is business enterprise” (p. 7). Baskoy (2003) noted Veblen described two ways the new business organizations benefitted the businessman; it assured efficient production in large amounts and provided a new way for them to restore profitability by controlling production. Baskoy (2003) also asserted that according to Veblen, “The modern corporation, as a symbol of the new period, is not an industrial unit but rather a business unit with the sole objective of earning profit. It makes collaboration, cooperation, and collusion easier through trust building and centralizing ownership in
the hands of the few…monopolistic pricing becomes pervasive in the era of large-scale enterprises” (p.1127).

A second theorist described by Morgan (1993) as a competition theorist was John Bates Clark. According to Morgan (1993), Clark viewed market place relations as changing in tandem with the changes in the nature of firm competition from “conservative” to “destructive”. Morgan wrote that Clark recognized that mechanization and industrialization had changed the “ethics of the market” and that “service” had given way to “rivalry” between large firms. The new era of competitive principles and means of competition, he proposed, needed a new moral influence.

Arthur Twining Hadley, the third theorist referenced by Morgan (1993), also viewed competition in the marketplace as an institution. Hadley believed prices, rather than defined by the efforts of buyers and sellers, was to some extent set by custom. Competition was not only an institution, it was also a process. The positions taken by Hadley concerning market processes was a rejection of the “invisible hand” concept of market relations, rather a position that market relations did not necessarily lead to public good. In addition, Hadley was firmly convinced that “Very large firms and monopolists assumed they could do as they wished, provided they obeyed the letter of the Constitution” (p. 574).

The work of competition theorists added to, and in some cases, superseded the classical economists’ view of market behavior. The recognition of the changes in the marketplace, and the participants in the marketplace, added to the knowledge of how markets and businesses functioned in the new environment. The theorists grasped the
reality of change and the new behaviors on the part of both producers and consumers. It did not, however, explain the emergence of big businesses.

The questions of why and how big businesses came into existence were not the focus of their work. Their work was an examination of a new type of competition that was not addressed by classical economic theory. Their research focus was on the mechanizations of this new competition and the effects it would have on society.

Organizational Theories – Early Twentieth Century

The organization as an entity became the central focus of many theorists in the early twentieth century (High, 2011; Klein, 2011; Perrow, 2002; Stack, 2002). Writings on organizations conducted during this period of time were not specifically directed at explaining the emergence of big businesses, only changes in market and organizational behaviors.

These theories are worth review, however, as they were the first to challenge the supremacy of classical economics and focus on the organization, and as Hamilton and Petrovic (2009) noted, “From its beginnings in the late 1890s through World War II, institutionalism was an extremely influential school of thought among American economists, social reformers, and New Deal planners” (p. 352). The institutional school of economics was extremely influential in later theorists’ explanations of the rise of big business.

The most widely known among these early institutional economists was Thorsten Veblen. Veblen, along with John R. Commons and Wesley Mitchell, are considered the founders of institutional economics (Hodgson, 1994; Hamilton and
Among the numerous theories espoused by Veblen was the theory of the business enterprise which he delineated in his book of the same name, originally published in 1904.

According to Hamilton & Petrovic, (2009), “First and foremost, Veblen wanted economics to be an evolutionary science” (and he) “intended to analyze the processes of change and transformation in the modern economy” (p. 63). Veblen’s position on the workings of modern capitalism stood in contrast to the “ordinary, matter-of-fact nature of the machine process” and he “recognized that the predatory nature of the enterprise frequently was used to disturb this process for the sake of financial gain” (Cornehls, 2004, p. 29).

Veblen (2013 [1904] posited the “motive of business is pecuniary gain, the method is essentially purchase and sale. The aim and usual outcome is an accumulation of wealth” (p. 16). Veblen continued “The work of the business man was rather to take advantage of the conjectures offered by the course of the seasons and the fluctuations of demand and supply than to adapt the course of affairs to his own ends” (p. 16-17). This process changed, however, “since the advent of the machine age” (p. 17).

Veblen (2013 [1904]) recognized the new business system, the modern business system, as “a single, comprehensive, balanced, mechanical process “(p. 18). This view allowed him to note the ability of one or more owners to gain or lose when a segment of the system moves out of balance. This observation is closely connected to his additional observation that the desire for financial gain may provide the incentive for businessmen to purposely disturb the system for the sake of financial gain since “the businessman
who aims at a differential gain arising out of interstitial adjustments or disturbances of the industrial system” is not concerned with a “furthering or hindering effect upon the system at large. The end is pecuniary gain, the means is disturbance of the industrial system” (p. 19-20). In addition Veblen (2013 [1904]) noted it is “a matter of indifference to the man of large affairs whether the disturbances which his transactions set up in the industrial system help or hinder the system at large, except in so far as he has ulterior strategic ends to serve” (p. 20).

The incentive of businessmen to purposely disturb the industrial system is not for the saving of production costs but rather “is a saving of the costs of business management and of the competitive costs of marketing products” (Veblen, 2013 [1904], p. 27). This action, according to Veblen, “It is doing away with unnecessary business transitions and industrially futile maneuvering on the part of independent firms that the promoter of combinations finds his most telling opportunity” (p. 28). Veblen’s viewed the “largest, most unquestionable, service rendered by the great modern captains of industry is this curtailment of the business to be done, -- this sweeping retirement of businessmen as a class from the service and the definitive cancelment of opportunities for private enterprise” (p. 28).

Veblen understood that businessmen would not only take advantage of situations that occurred in the economy but would be willing to manipulate the economy for their own gain even if the action was detrimental to the total economy. The theories of Veblen as well as those of other intuitional economists were instrumental in developing organizational theory but it did not specifically link these changes in the market and organizational behavior to the emergence of big businesses.
Organizational Theories – Mid-Twentieth Century

There were a number of works written in the 1940s on business topics that often addressed the business organization as an entity and its impact on society according to Maury Klein (2001). He specifically noted *Age of Enterprise: A Social History of Industrial America* published in 1942 by Thomas Cochran and William Miller. This work, according to Klein (2001), was pioneering in its approach to business history as “It offered a vivid overview of business history and its social impact through the early 1800s through the 1920s” (p. 432). Cochran, even at this early date, as perceived by Klein (2001), was focusing “less on what business was than on what it did, and he placed more business in a broad context” (p. 432). Klein also noted the works of other writers during this period of time including Karl Polanyi, whose work *The Great Transformation: The Political and Economic Origins of our Time* (1944) was an overview of the market economy and its impact on society.

During the 1950s, there were a number of works that continued the expansion of the study of big businesses and capitalism (Klein, 2001). Klein includes among the more influential of these works John Kenneth Galbraith’s *American Capitalism: The Concept of Countervailing Power* (1952), Kenneth E. Boulding’s *The Organizational Revolution: A Study in the Ethics of Economic Organization* (1953), and J. Willard Hurst’s *Law and the Conditions of Freedom in the Nineteenth-Century United States* (1956). Klein also notes sociologists during this same period of time were conducting research on big business as exemplified by David Riesman’s *The Lonely Crowd* (1950), C. Wright Mills’ *White Collar* (1951) and *The Power Elite* (1956), as well as William H. Whyte’s *The Organization Man* (1956).
Most of the work done during this period of time, according to Kline (2001), “tended to follow the traditional forms of research…the history of big business, like Thomas Gray’s ploughman, homeward plodded its weary way in search of both an identity and a direction, struggling still to escape the leech-like hold of the old robber baron debate” (p. 436). The next evolution in organizational research began with the work of Louis Galambos.

Galambos wrote a series of articles (1970, 1983, & 2005) with the premise that “some of the most (if not the single most) important changes which have taken place in modern America have centered about a shift from small-scale, informal, locally or regionally oriented groups to large-scale, national, formal organizations” (1970, p. 280). The evolution from institutional study of organizations was that now, instead of studying the evolution of specific economic organizations, the new organizational research stressed generalizations “drawn primarily from the work of Max Weber and other sociologists…major emphasis is placed on the hierarchical, bureaucratic structure of authority” (1970, p. 280-281). The new organizational research, according to Galambos, was not “to re-structure our view of the present” (but rather to) “offer a detailed study of the historic roots of the organizational revolution” (1970, p. 281-282). The most important theorist of this orientation was Alfred D. Chandler. According to Roy (1997), Chandler, is “the most influential, best-known, and most formidable…economic historian of the corporate revolution” (p. 7).

Chandler began his work on the study of organizations in the early 1960s, however, it was not until 1977 that his epic work *The Visible Hand: The Managerial Revolution in American Business* was published (Klein, 2001). The impact of
Chandler’s work is such that, according to Klein (2001), the history and construction of theories of big businesses can be divided into two eras, pre-Chandler and post-Chandler. Alfred Chandler’s book marked a sharp contrast to theories of big businesses that preceded his work. As Klein (2001) noted, Chandler’s publications “redirected the study of big business away from its traditional emphasis on case histories of business and individual biographies to the study of the structural dynamics of business firms and institutions” (p. 430). The majority of research on big businesses prior to Chandler’s work, according to Klein (2001), was primarily institutional and did not focus on explaining the emergence of big businesses or the operations of big business.

Chandler’s publication of *The Visible Hand: The Managerial Revolution in American Business* (1977) was “the right methodology in the right place at the right time” (Klein, 2001, p. 441). It would be difficult to comprehend the importance of this work although Klein (2001) quoted Richard John, a noted historian whose area of expertise is business history, as writing “Following the publication of The Visible Hand, non-Chandlerian approaches to the history of American business suddenly came to seem out-of-date” (p. 441). Although Chandler explicitly addressed the ‘modern business enterprise’ in his studies, it is appropriate to view his theories as pertaining to the rise of big businesses (Roy, 1997).

Chandler posited the purpose of his book was “to examine the changing processes of production and distribution in the United States and the ways in which they have been managed” (1977, p. 1). He presented eight propositions “to make more precise the primary concerns of the study” (P. 6). The first three of these propositions
addressed “why the visible hand of management replaced the invisible hand of market mechanisms” (p. 6).

Chandler’s first proposition was “that modern multiunit business enterprise replaced small traditional enterprise when administrative coordination permitted greater productivity, lower costs, and higher profits than coordination by market mechanisms” (p. 6). Chandler’s position was that the internalization of business units allowed for the routinizing of transactions between units that in turn lowered the cost of those transactions. He further posited “the internalization of many units permitted the flow of goods from one unit to another to be administratively coordinated” and “more effective scheduling of flows achieve a more intensive use of facilities and personnel” (p. 7).

Chandler’s (1977) second proposition was that “the activities of internalizing the activities of much business units within a single enterprise could not be realized until a managerial hierarchy had been created” (p. 7). The managers, according to Chandler (1977), “carry out the functions formerly handled by price and market mechanisms” (p. 7). The existence of a managerial hierarchy Chandler (1977) claims, “is a defining characteristic of the modern business enterprise” (p. 7).

The third of Chandler’s (1977) propositions was that the “modern business enterprise appeared for the first time in history when the volume of economic activities reached a level that made administrative coordination more efficient and more profitable than market coordination” (p. 8). The reason for the great increase in the volume of activities was “new technology and expanding markets” (p. 8). The first modern business enterprises were those that were “characterized by new and advancing technology and by expanding markets” (p. 8).
Chandler’s work resonated throughout the field of business history establishing the organization as the field of study rather than the individuals who built the businesses (Klein, 2001, p. 439). This was not his intent, according to Klein (2001), but rather a byproduct of his approach which was to take “one element of the organizational revolution, the modern business enterprise, and make it the core of his richly detailed analysis” (p. 439). Chandler, according to Martin Stack (2002), saw his interpretation as an improvement on the crude technological determinism “of earlier efficiency theories of the rise of big business that viewed the business as a passive responder to technological innovations” (p. 471). Klein (2001) took a different view noting Chandler’s theories “contained a strong thread of economic and technological determinism” as evidenced by his assertion the development of railroads were the reason for the emergence of big businesses (p. 439).

Chandler’s theories expanded on the observations and theories of previous organizational theorists by elucidating the internal efficiencies of managerial and administrative structures in large organizations. The first of his theories, that business efficiency replaced market efficiency as the basis of modern business, can be viewed as a restating of Veblen’s theory complete with the important role played by technology. Chandler’s two other propositions that explained the emergence of the modern business enterprise, the creation of a managerial hierarchy and the advantages of administrative coordination are less explanatory of the emergence of big businesses. Chandler’s theory of organizations, though adding to the theoretical foundations of organizational theory, does not explain the emergence of a big businesses, only what happened after it occurred.
Organizational Theories – Late Twentieth Century

Chandler’s work was so influential that it spread across many disciplines in the latter part of the twentieth century (Porter, 2006). Indeed, much of the work on the emergence of big businesses, as well as organizational studies during this time, was in reaction to his work, both of his theories of the emergence of big businesses as well as his theories specific to organizations. The aspects of Chandler’s theory criticized by theorists varied, some theorists were critical of their perceived view of his technological determinism while others were critical of his view of the organization and the role it played in the emergence of big businesses. Among the better known critics of Chandler’s view of the role of technology in the emergence of big businesses are Mark Granovetter and Geraldo Berk.

According to Stack (1992), Granovetter “rejected the technological, organizational, and trans-action costs of Chandler, Williamson, and others” (p. 473-4) and instead proposed a “theory of the social construction of industry” that consisted of four integral issues: the internal structure of firms in a particular industry, analysis of how firms interact with their input and output markets, consideration of how firms within an industry interact, and the recognition of governments and industry relations. This technique may not be equally applicable across all industries, according to Stack (1992), but “they do suggest an outline for socially constructed industry studies” (p. 474).

Stack (1992) asserts Berk “impugned the traditional argument that the rise of big business with its concomitant increase in industry concentration, constituted a natural, inexorable process” (p. 474). Stack (1992) further writes that Berk’s theories originated
with conclusions drawn from his analysis of the development and evolution of railroads in the United States. He concluded that there was more than one path to industrialization possible in the United States and that “alternative, moderately sized, firms were at least as efficient as Chandler’s large-scale, vertically integrated firms” (p. 474).

According to Novicevic etc. al. (2009), among the critics of Chandler’s explanation of the emergence of big businesses have been several prominent sociologists. Specifically, these sociologists were skeptical about “Chandler’s disregard for the potentially explanatory role of government intervention in industry” (p. 317-8). Among these sociologists were Neil Fligstein (1990), Frank Dobbin (1994), William Roy (1998), and Charles Perrow (2002).

Fligstein’s (1990) thesis was “the viability of the large industrial enterprise in the United States is most related to the long-term shifts in the conception of how the largest should operate to preserve their growth and profitability” (p. 2). These shifts, according to Fligstein (1990), “occurred in response to a complex set of interactions between the largest firms, those who have arisen to control those firms and the government” (p. 2). The entrepreneurs and managers, according to Fligstein’s (1990) theory, shifted their solutions when an opportunity was blocked by government and chose alternatives based on their analyses of problems of control they faced.

Dobbin used a comparative analysis of railroads in the United States and France to illustrate how the same problems faced by the railroads of two different countries triggered different reactions of the national government (Roy, 1997). The reaction of the United States government was to withdraw from active investment in the railroads while
France increased the government’s involvement, eventually nationalizing them. The reason for the different reactions, according to Dobbin, “was political culture and enduring policy styles” (p. 85).

Roy (1997) classified Chandler’s theory (as well as the institutional theories of Williamson and North) as efficiently theories that “share the assumption that there is a selection process that ensures that more efficient economic forms will prevail over less efficient forms” (p. 7). Roy (1997) found these theories “‘wanting’” and “validating the need for an alternative account” (p. 18). The theoretical perspective Roy (1997) asserted filled this “wanting” is one that includes the “Three interrelated concepts—power, history, and the state (p. 259). Roy, (1997) did admit, however, “efficiently theory itself can be reconceptualized within a framework of power” (p. 259).

Perrow’s (2002) was critical of Chandler’s theory (as well as other similar theories), which were critical of the lack of “paying attention to power” (p. 17). According to Perrow (2002), he would qualify Chandler’s theories by “paying attention to power and social costs, which Chandler ignored” (p. 17). He would also add “The same power and social costs qualifications…to the valuable institutional economic tradition, which conceptualizes markets and industrial structures” (p. 17). The theory he posited was that a lack of political power and the resulting ability of large organizations to change “the legal system to give organizations sovereignty” (p. 18) allowed “an economic system based on large organizations” (p. 17).

The organizational theories of the late twentieth century were more complex than earlier theories but they still did not offer a comprehensive explanation for the rise of big business. Many of the theories were directed at contesting existing theories of the
macroeconomic environment while others were attempts to explain the mechanisms of organizations. These theories did bring other factors into the vanguard of market and organizational analysis but they were not focused on explaining the emergence of big businesses.
CHAPTER 3
THEORETICAL FRAMEWORK, HYPOTHESES, AND METHOD

The intent of the study is to show that specific actions businesses took were the reasons for their emergence and continuation. The hypotheses in this study are based on Marxian and Weberian theories that address actions of businesses, Marx’s general law of capitalist accumulation and Weber’s theory of economic rationalization. Marx’s general law of capitalist accumulation explains what processes businesses took that enabled them to become big businesses while Weber’s theory of economic rationalization explains why other processes big businesses took allowed them to remain big businesses. These actions either made a business bigger or created conditions that were amenable to the continued existence of the big business. These theories, when combined, explain the emergence and continuation of big businesses during the second half of the nineteenth century.

There are four hypotheses in this study of the emergence and continuation of big businesses in the second half of the nineteenth century. Hypotheses one and two are concerned with the emergence of big businesses and are derived from Marx’s theory of the general law of capitalist accumulation, specifically his theories of the concentration of capitals and centralization of capitals. Hypotheses three and four are concerned with the continuation of big businesses and are derived from Weber’s theory of economic rationalization, specially the theory of the typical types of measures of rational economic action. The four hypotheses, when taken together, provide a comprehensive explanation for the emergence and continuation of big business during the second half of the nineteenth century.
Marx’s General Law of Capitalist Accumulation

Marx’s (1990 [1867] theory of the general law of capitalist accumulation is contained in Capital Volume I, Part Seven, entitled “The Process of the Accumulation of Capital”. The German language version of Capital Volume I only contained seven parts with Part Seven also containing Part Eight of the English version entitled “So-Called Primitive Accumulation”. It was Marx’s intent to use the general law of capitalist accumulation to show the impact of the growth of capital on the working class.

The topic of accumulation was introduced Marx’s earlier works including Economic and Philosophic Manuscripts of 1844 (1964 [1844]), The German Ideology (1998 [1845]), Grundrisse (1973 [1857]), A Contribution to the Critique of Political Economy (1970 [1859]), and Theories of Surplus Value (2013 [1863]). It was in Capital Volume I, however, where he expanded his discussion of the process and its impact on the development of capitalism and made the distinction between accumulation and primitive accumulation.

Marx (1990 [1867]) assumed that “primitive accumulation …precedes capitalist accumulation; an accumulation of which is not the result of the capitalist mode of production but its point of departure” (p. 873). Primitive accumulation, according to Marx (1990 [1867]), was nothing less than the historical process of divorcing the producer from the means of production. It appears as ‘primitive’ because “it forms the pre-history of capital and of the mode of production corresponding to capital” (p. 875). Marx was
clear that he was not as concerned with the primitive accumulation as he was with capitalist accumulation.

The primary concern of Marx (1990 [1867]) was capital accumulation, not primitive accumulation. In *Capital Volume I*, Marx explained the process of accumulation requires the capitalist to sell commodities and to reconvert the greater part of the proceeds back into capital. The reconversion into capital is the accumulation of capital.

Marx (1990 [1867]) noted that “every individual capital is a larger or smaller concentration of means of production, with a corresponding command over a larger or smaller army of workers” (p. 776). The process of concentration is that every accumulation becomes the means of a new accumulation. The process “increases the concentration of that wealth in the hands of individual capitalists, and therefore widens the basis of production on a large scale and extends the specifically capitalist methods of production” (p. 776). The growth of the individual capitals is also the concentration of the means of production.

The process of accumulation increases the number of capitals. As capitals grow, new and independent capitals split from the original capitals, thus increasing the number of capitals and the creation of struggles between them. Accumulation therefore not only increases concentration of the means of production, but also the “repulsion of many individual capitals from one another” (p. 777). Marx (1990 [1867]) also noted that the many capitals also attract one another. This process was advanced by Marx (1990 [1867]) as the centralization of capitals and, “is the concentration of capitals already
formed, destruction of their individual independence, expropriation of capitalist by capitalist, transformation of many small capitals into few large capitals” (p. 777).

The process of concentration, according to Marx (1990 [1867]), is slow compared to the process of centralization. The process of centralization intensifies and accelerates the effects of accumulation and the additional capitals formed in this process serve as vehicles for the exploitation of new inventions and discoveries and industrial improvements in general. Marx (1990 [1867]) noted that over time, capitals renew themselves to more perfect technical state with larger quantities of machinery and raw materials but a smaller workforce. The reduction in the workforce will repel more and more of the workers that were previously employees of that capital.

Marx (1990 [1867]) did not fully develop his theory of the centralization of capitals as he noted “The laws of this centralization of capitals, or of the attraction of capital by capital, cannot be developed here” (p. 777). Marx (1990 [1867]) noted “The battle of competition is fought by the cheapening of commodities. Thecheapness of the commodities depends, all other circumstances remaining the same, on the productivity of labour, and this depends in turn on the scale of production. Therefore the larger capitals beat the smaller” (p. 777). When capitals compete, the larger capitals have the advantage over the smaller capitals and it is the small capitals that are either absorbed into larger capitals or cease to exist.

Marx (1990 [1867]) also noted that the development of capitalist production is accompanied by the formation of the credit system. The credit system starts slowly, but over time, “it soon becomes a new and terrible weapon in the battle of competition and is finally transformed into an enormous social mechanism for the centralization of
capitals” (p. 778). Marx considers competition and credit to be the “most powerful levers of centralization...the force of attraction which draws together individual capitals, and the tendency to centralization, is stronger than ever before” (p. 779).

The progress of accumulation, according to Marx (1990 [1867]), “increases the amount of material amenable to centralization. i.e., the individual capitals, while the expansion of capitalist production creates, on the one hand, the social need, and on the other hand the technological means, for those immense industrial undertakings which require a previous centralization of capital for their accomplishment” (p. 779). The process of centralization supplements the work of accumulation by enabling industrial capitalists to extend the scale of their operations. It does not matter how the process of centralization occurs, the effect is “transformation of isolated processes of production, carried on by customary methods into socially combined and scientifically arranged processes of production” (p. 780).

Hypothesis One

Big businesses emerged after the beginning the Civil War by internal growth and this process is explained by Marx’s theory of the concentration of capitals.

Hypothesis Two

Big Businesses emerged after the beginning of the Civil War by acquiring smaller, competing businesses and this process is explained by Marx’s theory of the centralization of capitals.
Theoretical Framework for Hypotheses Three and Four

Weber’s Theory of the Economic Rationalization

Weber’s theory of economic rationalization, like Marx’s theory of capitalist accumulation, is closely linked to business processes. The theories of economic rationalization concerning business are only possible when assuming the correctness of Weber’s conclusions regarding the beginning of capitalism. The role of the spirit of capitalism in the commencement of capitalism is presented in The Protestant Ethic and the Spirit of Capitalism (1992 [1930]). The supposition Weber makes is that a specific belief, the spirit of capitalism, must exist within a culture in order for capitalism to originate. Once capitalism begins, it begins to evolve, eventually attaining the level of big business.

The central problem Weber (1992 [1930]) addressed “is not, in the last analysis, even from a purely economic viewpoint, the development of capitalistic activity as such...rather the origin of this sober bourgeois capitalism with its rational organization of free labor” (p. 24-25). Weber (1992 [1930]) further posited, “For though the development of economic rationalism is partly dependent on rational technique and law, it is at the same time determined by the ability and disposition of men to adopt certain types of practical rational conduct” (p. 26). There must be some aspect of a culture that, at least originally, compelled the adoption of this behavior. Weber’s conclusion was that it was based in religion, specifically the spirit of Christian asceticism.

Weber (1992 [1930]) concluded in The Protestant Ethic and the Spirit of Capitalism that the Puritan idea of the calling is the motivation for the adoption of this
behavior. According to Weber, Luther’s view of the Calling, “is something which man has to accept as a divine ordinance, to which he must adapt himself” (p. 85). The Puritan, who is one of the chosen for ‘everlasting life’, according to Weber, sees God in all occurrences of life, and if given the chance, must take advantage of opportunity. As Weber (1992 [1930]) notes, “The emphasis on the ascetic importance of a fixed calling provided an ethical justification of the modern specialized division of labor. In a similar way the providential interpretation of profit-making justified the activities of the business man” (p. 163).

The existence of an ideology that is fundamental to the existence of capitalism does not mean its manifestation, there needs to be action and this is what Weber (1978 [1968]) addresses in Economy and Society. Part One of the work may be considered a reference text with Part Two being Weber’s presentation of his views on the economy and de facto powers.

Weber (1978 [1968]) posited that social action can be oriented in four ways: instrumental, value, affectual, and traditional. The value rational social actions are those based on an underlying ideology. The underlying ideology of capitalism is ‘the calling’ Weber (1992 [1930]) analyzed in The Protestant Ethic and the Spirit of Capitalism. The value-rational social action individuals take are “for its own sake of some ethical, aesthetic, religious, or other form of behavior, independently of its prospect of success” (p. 24).

In order for capitalism to exist, action is needed to be taken with a prospect of success or as Weber (1978 [1968] stated “for the attainment of the actor’s own rationally pursued and calculated ends…when the end, the means, and the secondary
results are all rationally taken into account and weighed” (p. 26). The different types of social actions need not be mutually exclusive as Weber (1978 [1968]) also noted “It would be very unusual to find concrete cases of action, especially of social action, which were oriented only in one or another of these ways” (p. 26).

Weber (1978 [1968]) further elaborates on his view of the relationship of rational action to economic action as he writes “Action will be said to be “economically oriented” so far as, according to its subjective meaning, it is concerned with the satisfaction of a desire for “utilities” (p. 63). The definition of “utilities”, according to Weber (1978 [1968]), is the “specific and concrete, real or imagined, advantages of opportunity for present or future use as they are estimated and made an object of specific provision by one or more economically acting individuals” (p. 68). The “economically acting individuals” Weber (1978 [1967]) refers to is labor, “a group which is oriented to economic considerations” (p. 114).

Weber (1992 [1930]) successfully explained how rational free labor, a necessity for the development of capitalism, developed. The Puritan worldly asceticism as it “was carried out of monastic cells into everyday life, and began to dominate worldly morality, it did its part in building the tremendous cosmos of the modern economic order. This order is now bound to the technical and economic conditions of machine production which to-day determine the lives of all the individuals who are born into this mechanism, not only those directly concerned with economic acquisition with irresistible force” (p. 181). Weber (1992 [1930]) continued, “Since asceticism undertook to remodel the world and to work out its ideals in the world, material goods have gained an increasing
and finally an inexorable power over the lives of men as at not previous record in history” (p. 181).

Weber (1978 [1968]) posited a number of rational economic actions that could be traditional or goal-oriented, although he believed that in the West, the “traditional attitude had to be at least partly overcome in the Western World before the further development to the specifically modern type of rational capitalistic economy could take place” (p. 71). Weber had the insight to recognize that some economic rational actions would benefit businesses. The businesses that acted in accordance with these rational economic actions, and were successful in their execution, would have an advantage over those businesses that did not perform the actions or were less successful in their execution.

The activities by big businesses to attempt to acquire utilities are rational economic actions according to Weber (1978 [1968]) and he asserted “Where action is rational, this type of action will take place so far as, according to the actor’s estimate, the urgency of his demand for the expected result of the action exceeds the necessary expenditure” (p. 71). These actions would allow big businesses to better control their own destiny as they would have direct control over requirements of raw materials or power for the production of goods.

The activities by big businesses to contract for utilities when they cannot obtain them are a rational economic actions according to Weber (1978 [1968]) and he asserted “The systematic acquisition by agreement with the present possessors or with competing bidders, assures powers of control and disposal of utilities. These powers of control may or may not be shared with others” (p. 71). These actions would allow big
businesses to better control their own destiny as they would have indirect control over requirements of raw materials or power for the production of goods in the event they could not produce or secure them in their own right.

Hypothesis Three

Big businesses remained big businesses by gaining control of utilities necessary for production either through their own production of the utilities or by acquiring the businesses that creates these utilities.

Hypothesis Four

Big businesses remained so by forming contracts or agreements with other businesses or entities to assert control over utilities when they are unable to do so themselves.

Methods

This study contrasted businesses as they existed prior to the Civil War with businesses as they existed in 1890. The commencement of the Civil War was chosen as the beginning point of this study as the war had a dramatic impact on businesses. The date of 1890 was chosen as the ending date for the study as the last decade of the nineteenth century was a time of the beginning of many changes in the business environment that differentiated that period of time from the period of time used in the study.

The study presented information about processes which occurred during the period of time of the study that allowed for the emergence of big businesses and their
continued existence. The study differentiated social factors that impacted businesses as they existed during the time period of the study to years prior to those in the study.

The analysis was of representative big businesses that were created and existed during the time period of the study. The business or its predecessor may have existed prior to the years included in the study, but the analysis will be of the business as it existed during the time period of the study. The analysis will be of the actions taken by these businesses that allowed them to become and exist as big businesses.

The factors that were used to describe big business included the size of the big businesses as well as the extent of market control. The size factor included such characteristics as production units owned and their distribution as well as the amounts of production. Market control was a critical factor that was used in describing big businesses. The amount of market control provides the ability to contrast size on a quantitative basis.

The primary source of information for this study came from books and articles written on the history of big businesses as well as biographies of some of the leaders of big businesses during the time period of the study. These resources contained information on the actions that businesses took which enable them to become big businesses as well as information describing the size of the businesses and the market share they held at various times of their existence.

The information about theories of the emergence of big businesses was also obtained from original sources and secondary sources. The original books and articles were used when possible, but information was also obtained from secondary sources that either were a collection of articles about theories of the emergence of big
businesses or a book or article that presented the theory of the other and contrasted the author’s theory with existing theories.

The information about the history of business was obtained from secondary sources that were general histories of business or were histories of a specific industry or business. These resources provided information about the beginning of business as well as locations and significant social environments that impacted the growth of businesses and how they operated.
CHAPTER 4
CASE STUDIES

The years from 1861 to 1890 has been referred to as the second industrial revolution and the big business era. There were many changes in society during this period of time, one of which was the emergence of businesses. Many industrial sectors came to be dominated by these large businesses, a phenomenon that was new in the evolution of capitalism and would prove to be an integral aspect of not only the economy, but all aspects of society. The following are case studies of representative big businesses of the era.

The New York Central Railroad

Railroads are often categorized as the first big business (Blackford & Kerr, 1994). Railroads developed rapidly during the first half of the nineteenth century and comprised seventeen of the twenty-five largest companies in the United States by 1856 as measured by capitalization. There were over 30,000 miles of railroad track in 1860, but it was divided among hundreds of companies with only a few trunk lines possessing over 500 miles of rail (Stiles, 2009). The earliest railroads were not successful due to competition and often failed when their government support ended.

Almost all railroads were east of the Mississippi River in 1860 (96%) and concentrated in the Northeast, often originating in cities close to the Atlantic Ocean spreading inland (Bryant & Dethloff, 1990). These early railroads were poorly constructed, without a uniform gauge and most were forced into mergers by their government benefactors in order to avoid cessation of operations. It was not until after
the Civil War that the financing of railroads came primarily from private investors although government entities still were assisting the construction of the railroads by giving land grants.

The New York Central Railroad was one of two greatest railroads that existed in the East during the late 1800s, the other being the Pennsylvania Railroad (Blackford & Kerr, 1994). The New York Central Railroad was chosen for this case review as it had a longer history than the Pennsylvania Railroad and its operation history included three of the most famous “robber barons” of the era, the industrialist Cornelius Vanderbilt and the financiers Jay Gould and J. P. Morgan.

The genesis of what was to become the New York Central Railroad was the creation of the Mohawk and Hudson Railroad in 1831 (Harlow, 1947). It was only one of hundreds of railroads started in the first half of the nineteenth century although one of the earliest. Like other railroads of the era, it was built to compete with canals for traffic; in this case, the competition was the Erie Canal. The man with the idea of the railroad, which was to run between Albany and Schenectady, was George William Featherstonehaugh, a gentlemen farmer who had settled in the area and had a passion for reading about railroads. The tiny railroad, only sixteen miles in length, would have become a long forgotten footnote in the history of the early railroads had it not merged with nine other railroads built in the ensuing years to form the New York Central Railroad in 1851 to facilitate traffic between New York City and East Albany. None of the early railroads were commercial successes but the state government wanted to maintain the passageway. The merger of the railroads, however, did not form a profitable railroad.
The New York Central was not the only railroad not making a profit in 1850s, almost none were (Harlow, 1947). A meeting of competing railroads in New York City in 1853 failed to bring an agreement on freight rates and fares, but another meeting in 1854 was more fruitful with agreement on both issues. The agreement lasted only six months, however, as one of the railroads broke ranks and cut rates ending the attempt at controlling competition. In addition, new railroads had been built which added additional competition. The New York Central was the largest of the railroads and had the best route as it served many locales the other lines did not.

The history of the New York Central became intertwined with that of Cornelius Vanderbilt during the 1860s. Vanderbilt was already the richest man in America having made his fortune in the shipping business during the first half of the nineteenth century (Morris, 2005). In the early 1850s, he began moving away from the shipping industry to railroads, first serving on the boards of railroads he assisted financially as they were needed by Vanderbilt’s shipping companies to move goods from his ships to their ultimate destinations. Once out of the shipping industry, however, he decided to devote his time and substantial fortune to owning and running railroads. The first railroad he took over was the small New York & Harlem Railroad which had been organized in 1831 (Stiles, 2010). Vanderbilt had first invested in the railroad in 1854 and took full control in 1863 after twice rescuing it from bankruptcy. The railroad was so small it was ignored by other businessmen and deemed an unattractive investment, but Vanderbilt recognized the one big advantage it did have, it was one of only two railroads that could move goods from Manhattan to connecting railroads.
Once he had obtained the New York & Harlem, Vanderbilt still needed the New York Central Railroad as the connecting railroad to his own (Stiles, 2010). The New York Central at the time was competing with three other railroads that moved cargo from the East coast to the West, a competition the New York Central was winning as it had connections to agricultural and manufacturing centers that its primary competition, the Erie Railroad did not possess. The four railroads did not possess a means to transport goods to the center of Manhattan and had to connect to either the New York & Harlem or the Hudson River Railroad. Vanderbilt needed the New York Central to control the movement of goods from seaboard ports to the inland centers.

Vanderbilt tried working with management of the New York Central for a few years but finally deemed the situation untenable and deemed the best solution was to control the railroad (Stiles, 2010). By 1867, through the manipulation of people and money, Vanderbilt not only gained control of the New York Central but also its only true competitor, the Hudson River Railroad. Vanderbilt combined the two railroads under the name of New York Central and Hudson River Railroad thus creating the most valuable railroad in the United States, a railroad with virtually no competition in its area of operations.

The New York Central and Hudson River Railroad, as it was called at the time, was a horizontal organization that had been created not by profits, but rather by the acquisition or destruction of competition. The railroads that were melded together to create the organization as an oligopoly were in general not profitable and their existence prior to their acquisition or merger depended on continual financial assistance by their creators or government entities. Whenever a railroad appeared to be in a situation to
make profits, other railroads were created as competition and, in the end; there was insufficient business to support multiple railroads. The only means of creating profit was to have a monopoly or at least the power to control prices.

Union Pacific Railroad

The construction of railroads in the western United States began decades later than those in the eastern United States, but by 1890, they constituted almost half the railroad miles in the United States (Hughes & Cain, 2003). The circumstances of their beginning were different than that of railroads in the East as was their history of growth. The magnitude of the size and operations of this relatively small number of major railroads would have a dramatic impact on the United States in the late nineteenth century as well as into the twentieth century.

The existence of coast to coast railroads had been the dream of many Americans in the 1850’s as well as many in the American Congress. Congress had even sent expeditions to find routes to the Pacific Ocean during the 1850s and had debated those routes (White, 2011). The Civil War interrupted the dream of a coast to coast railroad as there were more pressing matters of concern. This did not mean, however, that the topic of a transcontinental railroad was forgotten.

The Civil War had a positive impact on railroad construction even if more railroads were destroyed than built during the time period. Prior to the Civil War, the railroads were, in White’s (2011) words, “as disarticulated as the nation that contained them” (p. 2). The railroads did not have standardized gauges which required the frequent movement of cargo and passengers from a train on one railroad to a train on
another railroad or sometimes, to wagons, ferries, or human bodies. The necessities of the Civil War proved successful in organizing coordination of railroad organizations as well as creating the financial and government institutions that would prove indispensable in the future of transcontinental railroads.

The beginning of the transcontinental railroads actually took place during the Civil War with the passage of the Pacific Railway Act of 1862 based on the grounds of military necessity (White, 2011). The act, in addition to establishing two railroad lines, created the structure of loan guarantees and land grants that would prove imperative to the construction of the railroads after the Civil War. The inducements of loan guarantees and land grants, however, failed to attract the capitalist investors Congress had hoped to materialize after the passage of the Pacific Railway Act of 1862. The failure to draw public funds for the construction of the railroads was due in part to the risk involved in investing in building a railroad through what many deemed as “1800 miles of railroad through an uninhabited territory” (White, 2011, p. 17). The more prudent investors may have declined the invitation to invest, but there were some who viewed transcontinental railroads as an opportunity to make money.

The Union Pacific Railroad was to build 2/3rds of the total railroad, going west from Omaha, Nebraska. It was to meet the other part of the transcontinental railroad that was to be constructed by the Central Pacific which was building east from Sacramento, California. The Union Pacific, by law, was not to come into existence until Congress opened its subscription book and sold two thousand shares (White, 2011). The railroad had an inauspicious beginning as it only sold twenty shares; however, there were two individuals who did have an interest, Thomas Clark Durant and George
Francis Train. Both men had some experience in railroads, although nothing on the scale they were now aspiring.

Durant had bet on the Union Pacific beginning at Omaha as he was already building a cross-Iowa railroad. He also had bought land around the Omaha area anticipating selling it for a large profit once the decision was made as to which city would be the eastern beginning of the transcontinental railroad. Durant had an advantage over the proponents of the other two possible origination points in Nebraska; he had once hired Abraham Lincoln to represent his company in a dispute. Lincoln’s decision to pick Omaha as the origination point for the transcontinental railroad may also have been influenced by the fact that it was the change in the Iowa delegation’s vote that gave him the Presidency in 1860.

Since no one wanted the Union Pacific shares, it was easy for Durant and Train to take control with little investment of their own. The act that created the transcontinental railroad limited investors to ten percent ownership, but Durant convinced other people to sign documents, promising to pay their costs, which stated they had bought the stock. Since the purchase required only a ten percent down payment, and only ten percent of that amount had to appear in the corporate treasury, it is unclear how much actual money was actually involved in the process of purchasing the stock (White, 2011). Durant was able to obtain enough stock to control the Union Pacific by 1863.

The second railroad was the Central Pacific, controlled by a California corporation with four financial backers who became known as “The Associates”. The members of the group were local businessmen and included Leland Stanford, who
would later establish Stanford University, Collis Potter Huntington who would later establish the Huntington Library, Mark Hopkins, and Edwin Crocker. The contact they had in Washington, D. C. was a man named Theodore Judah, who was chief engineer of the Central Pacific but also secretary of the Senate Committee on the Pacific Railroad. Judah used his position to garner support, in part by distributing Central Pacific stock to those who could be of assistance in obtaining the rights to build the railroad.

Both railroads were in financial trouble almost immediately (White, 2011). The Union Pacific had built almost nothing by 1864 while the Central Pacific had only built eleven miles of railroad and were out of money. Durant and Huntington came to the same conclusion, if they did not receive additional help from Congress and financial markets skepticism could not be overcome, the transcontinental railroad was not going to be built.

The task for both men was to obtain changes in the Pacific Railway Act of 1862 and they offered bonds to those that could help them. Durant and Huntington obtained what they wanted, the passage of the Pacific Railway Act of 1864 which White (2011) writes was “the worst act money could buy” (p. 22). The act lent the two companies $50 million worth of government bonds with the Federal Government guaranteeing the principal and interest. In addition, the Federal Government reduced its claim to railroad property to second mortgage after allowing the railroads to issue $50 million in first mortgage bonds. As the act was written, the government paid the interest on the bonds, not the railroads for thirty years.
This was not the only change in the law that proved a bonanza for the railroads. The law also doubled the land subsidy so that the railroads received 12,800 acres for every mile of railroad built and any coal or iron the land contained. The amount of land the Federal Government granted to the railroads over the years amounted to over 131 million acres and they received an additional 44 million acres from state governments. The Federal Government also failed to set a site for the connection of the two railroads essentially pitting them against one another in a race.

The railroad owners made millions of dollars in the ensuing years as did the close cadre of individuals with whom they dealt. The total amount is unknown but what is known is that the trickeries used by both the Union Pacific and the Central Pacific owners moved money from levels of governments and individual investors and speculators into their control. The apparent success of the railroads enticed others into the transcontinental railroad business creating excess competition and, in reality, no one knew if they were making a profit. The railroad owners kept building and operating as long as they could secure money from investors, government or private.

The Panic of ’73 provided a pivotal moment in the history of the Union Pacific. The company was almost bankrupt when Jay Gould, in cooperation with the Sidney Dillion, the president of the company, devised a scheme to cheat investors and bondholders and gain control of the Union Pacific. The Central Pacific, still led by Huntington, was also in dire straits and survived by allowing another of Huntington’s railroads to fail putting his Central Pacific bankers in the situation of being forced to give him additional time to repay their loans.
The beginning of the two railroads, the Union Pacific and the Central Pacific, was unique in that they were created by the Federal Government to obtain a specific objective, the connection of the two coasts of the United States. The attainment of profit was secondary to this objective and was not objectively considered by the Federal Government despite the dependence of their profit to repay the federal funds loaned to them by the bonds created for that purpose. The lack of faith of public investors in the profitability of the enterprise, or even viability of the railroads, was an obvious indicator of the high risk they associated with the venture. There would eventually be a need for railroads in the western United States but not in the mid-nineteenth century. The lack of oversight of the project made it possible for a few men to make great fortunes, not by creating wealth via a profit making business entity, but rather by building the railroads by using the generous funds provided by the Federal Government to pay them, directly and indirectly. The railroads were only able to maintain their existence by continued funding by the Federal Government, banks and private investors. These were not businesses in the classical definition, as they were not built to make a profit.

Western Union

The development of the telegraph companies and railroads were intertwined as the railroads needed the telegraph to schedule trains and the telegraph companies used the railroad rights-of-way to string its poles and wires (Blackford and Kerr, 1994). Initially, many of the telegraph companies were subsidiaries of railroad companies due to their need for communication.
The means of faster communication was first put to use in France when Claude Chappe invented a primitive communication device that had pulleys mounted on stations which could be raised or lowered (Gordon, 2004). The device, though an advancement over other types of communication, had limited use in the United States due to the vast distances between cities. Chappe does, however, receive the acknowledgment of inventing the term “telegraph”.

The knowledge of the ability to transmit electricity over wires had been known since the eighteenth-century and efforts at using this knowledge had been tried by many people, including William Fothergill Cooke and Charles Wheatstone of England who developed a primitive device in England that was used commercially. The system that was eventually used around the world, however, was developed by Samuel F. B. Morse in the United States. Morse added nothing new to the technology of telegraphy except the one aspect that made the system viable, the Morse code.

Morse and his partners early attempts at obtaining funding from the United States government proved futile for six years as no one in the government could see potential in the device. It was only after Morse added a new partner, F. O. J. Smith, chairman of the House Committee on Commerce, that he was able to obtain a $30,000 appropriation to fund his experiment. The experiment proved successful in 1844 with a communication between the Capital Building and Baltimore. The growth of the telegraph was astonishing as by the late 1840s, virtually all major American cities had telegraph lines and, by 1861, telegraph lines reached San Francisco.

The evolution of the telegraph industry in many ways mirrored the railroad industry with mergers except the time frame was greatly collapsed for the telegraph
industry. The beginning of Western Union was the creation of New York and Mississippi Valley Printing Telegraph Company in New York in 1851 which by that time was one of ten different lines (Nonnenmacher, Unknown). In addition to these companies, another 65 companies existed in other parts of the United States.

The competition among companies led to alliances between companies putting those companies without the alliances at a competitive disadvantage. The competition led to mergers, which by 1857 left six regional monopolies that were further reduced to only two monopolies by 1864, Western Union and the American Telegraph Company. Another company, the United States Telegraph Company, had formed in 1864 by consolidating smaller competitors during the early 1860s. In 1866, Western Union absorbed both competitors.

Western Union’s oligopoly was now 90 percent of the market allowing it to have profit margins of 30 to 40 percent. This level of margins attracted competitors but Western Union was able fend off challengers with only the Atlantic and Pacific Telegraph Company, created by Jay Gould, successful enough to take part of the telegraph market, about 10-20%. Gould was able to take control of Western Union from Vanderbilt in 1881 when the two firms merged. The main obstacle to the continued success of Western Union was the telephone, invented in 1876 by Alexander Graham Bell. Western Union had the chance to buy the telephone patent in the 1890s for $100,000 but declined, deciding that paying big dividends was more important than expansion.

Western Union’s rise to dominance followed the path of horizontal mergers and acquisitions. It used agreements with other companies to retain its dominance in the
1850s but relied on mergers and acquisitions of competitors in the 1860s to retain its dominant position. The dominance it possessed allowed it to pay tremendous dividends to its investors but failure to consider the importance of technological changes allowed newer companies to take its business and relegate it to a specialty niche by the late twentieth century.

Carnegie Steel

Carnegie Steel began as the Carnegie, McCandless, and Company, founded in 1872 by Andrew Carnegie, David McCandless, William Coleman and other partners (Nasaw, 2006). The partners had already planned to build the first Bessemer process steel plant in the United States in Braddock Township, Pennsylvania in 1873 to take advantage of the recent tariff on English steel which would make it almost impossible not to make a profit on steel made in the United States.

Carnegie was already an extremely successful and rich man in 1872 owing to his investments in railroads, oil wells, construction, iron manufacturing and bond trading before he embarked on the new company. The iron and steel industry was his great interest and he toured steel mills in Europe, learning as much as he could before venturing on his own to establish a steel company. Carnegie was also intelligent enough to know that neither he nor his partners knew enough about the steel business to operate a steel plant. He ensured to the degree possible of the success of the plant by hiring an experienced chief assistant to the general superintendent from another steel company, Cambria Iron Company.
Even before ground was broken for the plant, he had already secured a source of iron ore needed for the plant. This was fortunate as almost immediately the Panic of ‘73 forced him to delay construction. He was able to remain solvent by selling his investments in his other companies other than the Union Iron Mills, the Lucy Furnace and Keystone Bridge. Carnegie was one of the few businessmen to weather the Panic of ‘73 without significant losses. This allowed him to make future investments that would provide a market for his steel. The purchaser was the Texas & Pacific Railroad, a railroad owned by in part by an old friend and employer, Tom Scott. Carnegie was also a part owner in the railroad.

The Panic of ’73 had hurt the steel businesses of not only Carnegie but other producers as well. In an effort to stem their losses, a group of furnace owners met in 1874 to make an agreement to restrict output to alleviate the ongoing price war. Carnegie also reduced the pay of the main workers in the plant as per an agreement that was already in place that allowed their pay to go up or down with the price of the product. The wage agreement allowed Carnegie to operate the plant for seven years during which there was peace between the workers and plant management.

The profit of the steel plant at Edgar Thomson was guaranteed due to an agreement between steel producers on the amount of production and the price of the finished product (Nasaw, 2006). The plant was immediately returning an annual 40 percent profit on the price of its stock. Carnegie used his personality, as well as financial leverage, to obtain contracts for his plant. Even in bad times, he kept the plant producing even if it did mean less profit in order to keep the best workers. Carnegie
also now had complete control of the plant and company, having bought out his partners when they needed money during the Panic of ’73.

The next chapter in the history of Carnegie Steel was made possible by Carnegie’s astute decision to retain ownership of Union Iron Mills and the Lucy Furnace during the Panic of ’73. In 1881, Carnegie merged the two companies he kept with his own company to form Carnegie Brothers & Company, Ltd. It was Carnegie’s plan to have the two people upon he depended to run his company, Tom Carnegie of Union Iron Mills and Harry Phillips. Andrew Carnegie was primarily an absent owner and depended on others to run his businesses.

Once in charge of the new company, Tom Carnegie knew he needed to ensure a steady supply of coke for his furnaces. This he did by approaching Henry Clay Frick, the owner of a large and growing empire of coke fields and ovens with an offer to buy part of his company in return for providing coke to Carnegie Brothers & Company. Frick, who needed money for expansion, agreed to the deal, selling 11 percent of his company to Carnegie Brother & Company. This was not enough of a guarantee of coke for the Carnegie brothers, who would in two years own half of Frick’s company and 74 percent by 1888. The relationship between Andrew Carnegie and Henry Frick lasted for almost twenty years, most of those years with Frick as the chairman of both companies and running them on a day-to-day basis. Frick was extremely successful running the companies, receiving large amounts of pay during his years as the manager of the companies and millions more when the two companies were merged in 1900.

The early 1880s was a period of time with a series of business successes by Andrew Carnegie and his steel company. The success of his company had others copy
his business but his rapport with the Amalgamated Association of Iron and Steel Workers union and contacts with high level officials of railroads allowed him to either force potential competitors to sell to him or be bankrupted by him. Even if wages were lowered, and they were in 1883 and 1884, Andrew Carnegie convinced union officials it was necessitated by the decline in prices for rails. His company did not have problems with strikes during this period as did other companies, further strengthening his advantage in dealing with competitors as well as allowing him leverage in forcing railroads to keep their transportation prices low. This changed, however, in 1884 when the Pennsylvania Railroad raised the cost of moving coke to his plant. The Pennsylvania Railroad decided to charge Carnegie’s company more to move his coke as they were only able to move cargo one way on trains that moved his coke. The railroad was able to move freight both ways when doing business with other mills. Carnegie was determined to control this aspect of his business operation, and he turned to his new neighbor in New York City for assistance, William Henry Vanderbilt.

William Vanderbilt had inherited almost all of his father’s fortune and was in the process of deciding whether to invest in establishing a competing railroad to the Pennsylvania Railroad which would extend from Philadelphia to Pittsburg. Carnegie offered to invest in the enterprise if his company was given preferential prices for shipments. The prospect of competition between the two railroads caused investors of both to hesitate, however, and a deal was struck whereby both parties, that of Vanderbilt and Pierpont Morgan, now a major owner in the Pennsylvania Railroad, would purchase the properties of each other so that each would now have a monopoly in their own state. The new railroad to compete with the Pennsylvania Railroad was
never completed, although 60 percent completed at the time. This setback did not set well with Carnegie and he fought the Pennsylvania Railroad for eleven years, often in alliance with farmers, manufacturers and merchants who were fighting the monopoly the Pennsylvania Railroad had on pricing (Strouse, 1999). It was not until 1896 that Carnegie gained control of another competing railroad, the Pittsburgh, Shenango & Lake Eire, that he could force the Pennsylvania Railroad to cut their rates.

The history of Carnegie Steel, like that of the New York Central Railroad, is that of innovation that brings almost immediate competition. The primary difference is the attempt, with some success, of moving beyond horizontal control to vertical control to overcome competition. Andrew Carnegie knew he needed more than an oligopoly to ensure the success of his company; he also needed control of indispensable raw materials, specifically coke. This he did by combing forces with an oligopoly in the coke industry, the H. C. Fricke Coke Company.

Carnegie was perceptive that in obtaining control of the coke company, he could ensure a reliable source of coke for his company while competitors would have to look elsewhere for their coke thus lessening their competiveness. He also was shrewd in having Frick run both companies as he recognized that Fricke was the most capable person to do so. Carnegie, unlike Vanderbilt, was not a manager and had Frick manage the companies as a professional, a type of manager that would become more prevalent in the future of business operations. The one aspect of control Carnegie failed to obtain, at least not until 1896, was transportation of his finished products. The failure to obtain this control cost him about $1.5 million per year as he did not have the
leverage to control railroad transportation costs. This aside, Carnegie still made huge sums of money, enough that he was the richest man in the United States when he died.

Standard Oil

Prior to the late 1850s, home illumination for most Americans was by candles or lamps fueled with lard oil or camphene (Whitten & Whitten, 2006). The discovery of a means of creating a substitute fuel from coal – kerosene - occurred in the middle 1850s. The process of creating kerosene involved the heating of coal until it formed a liquid similar to oil which could then be distilled into a variety of oils. The vast market for the product attracted capital and entrepreneurs who built refineries to process coal to kerosene.

The ability of using oil to make a fuel for lighting was known in the 1850s but dismissed as a viable alternative to coal oil as oil was considered too scarce to meet the demand. This problem was eliminated with the drilling of the first successful oil well in Titusville, Pennsylvania by Edwin Drake in 1859. Drake had made use of drilling equipment that had been used in salt drilling for many years and his success set off a wave of drilling by men seeking quick fortunes.

The beginning of Standard Oil was the investment of John D. Rockefeller and Maurice Clark, his business partner, of $4000 for half interest in a new refining venture named Andrews, Clark and Co. in 1863 (Chernow, 1998). Rockefeller had borrowed most of his part of the investment from his father and deemed the venture a small side investment to his main business of produce commissioning, a business that Rockefeller and Clay had created in 1858. Rockefeller knew little of the oil business other than it
was a booming business by the early 1860s. He did, however, have the business astuteness to run the company.

The first important decision he made was to have the refinery built in a location with access to means of transportation, a waterway that led to a railroad. This immediately gave him the advantage of being able to obtain preferential rates on transportation. In the early days of the oil business many refineries were built in the same area and it was almost impossible not to make a fortune. Rockefeller determined this situation would not last and started looking for ways to improve the company’s position in marketplace.

The first action he took was to produce his own barrels as a shortage of barrels was a common problem. The company began by buying products it needed such as pipes and joints, hired its own plumber do the work and it did its own hauling and loading. Within a year, the refinery was the most profitable aspect of their business supplanting the profits made by produce commissioning. At this point, Rockefeller devoted himself to the refining business.

Rockefeller as a person was very much in need of order, a situation that was not to be found in the turbulent oil industry. These early days were more akin to gold-rushes where the earliest adventurers made the fortune and then moved on. Rockefeller was not this type of businessman, according to Chernow (1998), he “represented the second more rational stage of capitalist development” (p. 81). Bringing order to the oil business would be a challenge for Rockefeller, as the industry had a reputation for extremes of violent price vacillating due to gluts and shortages.
As Chernow (1998) noted “John D. Rockefeller had an unfailing knack for knowing who would help or hinder him in his career” (p. 81). The first of the people hindering him, in Rockefeller’s view, was his business partners. Rockefeller believed them to be both immoral and poor businessmen and changes had to be made in their business relationships. Finally, in 1865, Rockefeller acted on his beliefs after being firmly convinced of the future of oil when a major discovery was made in Pithole, Pennsylvania.

Rockefeller’s partners often threatened to break up the company when they disagreed with his expansion plans. In 1865, he took them up on their offer having previously agreed with the one partner he did trust. The company was auctioned to the highest bidder, a bidding process Rockefeller won. Rockefeller now controlled the largest refinery by far in Cleveland and renamed the company Rockefeller & Andrews.

Now in total control of the company, Rockefeller immediately began expanding by building a second refinery. He also devised and executed a means of improving the manufacture of barrels which lowered his costs, and he found markets for chemical byproducts of the manufacture of kerosene. It was unfortunate that Rockefeller could find no use for the byproduct gasoline other than as fuel for distilling oil. The result was the dumping of gasoline by all the refiners either into the ground and/or into the Cuyahoga River to the extent the river frequently caught fire.

The refinery business was a capital intensive business and Rockefeller was almost always in need of capital in the early days of the company. Fortunately, he was a steady and predictable customer of the Cleveland banks and he had little trouble obtaining funds when he needed it. The access to cash gave him an advantage over
other businessmen that had to depend on cash for their businesses. He was so admired by the banking establishment that by 1866 he was a director of a fire-insurance company, and by 1868, a director of the Ohio National Bank.

Rockefeller’s luck was evident in 1867 when he approached banker Stephen Harness for a loan. Instead of a loan, Harness offered to invest in Rockefeller’ company if he made Henry Morrison Flagler the secretary to the company. The fortunate Rockefeller was able to get the person he needed who would share his dreams for the company and a $100,000 capital infusion. Harness received a third of the newly reconfigured company for his $100,000 that would in the future make him an enormously wealthy man.

The bane of the oil business in Cleveland was transportation. The earliest transport of oil was by wagon, but this was costly and inefficient. There was fierce resistance against pipelines so it fell to the oil companies to use railroads. Rockefeller’s refineries dominated the market - he produced as much as the next three refineries combined - he was able to offer volumes to the railroads that gave him leverage to reduce his shipping costs. The deal was important to the railroads as they now had a vested interest in creating a giant oil monopoly that would boost their own profits.

The refinery industry was in serious trouble by 1869 (Chernow, 1998). The rapid expansion of refinery construction had resulted in capacity three times the amount of oil produced and virtually all refineries were operating in the red. It was at this point that Rockefeller decided if the industry was to be profitable “he would have to tame and discipline it” (p. 130).
The problem of implementing such an aspiration needed money, a lot of money. The solution to the problem was incorporation which would allow the company to sell to outside investors; the problem was most states had restrictions that a company could not own property outside the state of incorporation. Rockefeller proceeded by abolishing the Rockefeller, Andrews and Flagler Company and replacing it with a joint-stock company, Standard Oil Company. At this point, the company controlled 10 percent of American petroleum refining as well as other ancillary companies making products for the refining business.

The corporation was not successful in selling shares due in part to 1869 being the year Jay Gould and Jim Fisk tried to corner the gold market by manipulating President Grant’s monetary policy but failed miserably taking down a dozen Wall Street houses. Instead, Rockefeller decided on another course of action; he would acquire all the remaining twenty-six competing oil refineries in Cleveland.

Rockefeller started his crusade by purchasing New York’s premier oil buyer as well as a refinery on the East River. This purchase allowed him to move into the center of oil exchanges that now controlled the oil. His next move was to strike a deal with Tom Scott, the power of the Pennsylvania Railroad. As part of the deal, Cornelius Vanderbilt invested $50,000 in Standard Oil.

Scott conceived of an arrangement between the three competing railroads - the Pennsylvania, the New York Central and the Erie – with some of the larger refineries, including those of Rockefeller, under a shell company called the South Improvement Company. The railroad would sharply raise their rates to all refineries, but those in the shell company would receive substantial rebates. The shell company would also give
the refineries funds from those paid by competing refineries. As Chernow (1998) notes, “it was an astonishing piece of knavery, grand-scale collusion such as American industry had never witnessed” (p. 136). Standard Oil and the Southern Improvement Company president, now a shareholder in Standard Oil as well, controlled the company. The new company not only allowed Rockefeller to control refinery prices but allowed the railroads to do the same. News of the new arrangement leaked, however, and the ensuing public and governmental pressures forced the members to abrogate the agreement. Rockefeller lost the battle but won the war as just the possibility of such an arrangement so frightened the Cleveland refiners that virtually all of them sold their refineries to Rockefeller in just over a month’s time.

Rockefeller tried to form a similar cartel just after the failure of the Southern Investment Company but this also was doomed to failure by some members producing over their quotas and the refineries not in the cartel selling all they wished. Rockefeller determined the only way a cartel would work was if he had total control. The Panic of ’73 gave him the opportunity.

Rockefeller had the cash to outlast other refineries during the downturn and buy them out as they failed. Standard Oil controlled about 25 percent of the refinery market in 1873 and, having obtained the Cleveland refineries, extended his search for purchases from city to city in his quest for national consolidation. All of this had to be done in secrecy, however, with the purchased company operating as though it was independent, never showing any connection to Standard Oil. Rockefeller was enormously successful at gaining control of refineries and then set his sights on the major obstacle to total control of his empire, the railroads.
Rockefeller began this part of his journey to total control by agreeing with the Erie Railroad in 1874. The deal would allow Erie to transport half of the Western oil output of Standard Oil if the Erie would update its equipment that shipped oil. He was just as successful in his dealings with the New York Central (William Vanderbilt was an owner of Standard Oil stock) and soon had almost total control of oil transport over the two railroads.

The success of Rockefeller’s plan to dominate oil refining was so significant that a new means of managing the assets of the affiliated companies became necessary, the trust. In 1882, Samuel C. T. Dodd, then attorney for Standard Oil, devised the trust to simplify and coordinate operations of the far flung empire. First, a Standard Oil Company would be incorporated in each state where Standard Oil had a major interest. The shares of those companies would be in the hands of trustees who would issue certificates of interest, in effect, the union would be of shareholders, not corporations. The trust, with shares in forty-one companies, was worth $70 million and controlled 90 percent of American refineries and pipelines.

Standard Oil was all powerful in the refining, transportation and distribution of oil products in the early 1880s but owned only four producing oil wells (Chernow, 1998). Rockefeller had been hesitant to invest in oil production in part due to its nature of boom or bust but he was primarily concerned with the fact that the only oil of any consequence had been discovered in a relatively small area of Pennsylvania. There was always the possibility that oil did not exist anywhere else and the oil from Pennsylvania would play out. This all changed with the discovery of oil in northwest Ohio in 1885. Rockefeller now went on a buying binge spending millions on oil,

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properties. Rockefeller also bought all the oil he could from Lima, Ohio producers and by 1888 had over forty million barrels in storage tanks when this oil was selling for fifteen cents per barrel. He also bought Union Oil and three other big oil producers that had over three hundred thousand acres of land in Pennsylvania and West Virginia. By 1891, Standard Oil owned 25 percent of American oil production. He also started building refineries near the oil producing areas to lessen the distance needed to transport the oil.

Standard Oil was a classic example of horizontal company until the late 1880s. Rockefeller’s intent was to control as much as he could of the costs of refining in the beginning as well as costs of transportation. After creating a stable and profitable company and forming close relationship with local bankers, he then moved to eliminate competition by buying them out at the most opportune time. The availability of funds gave him an advantage to eliminate competition when the overall economy and the market for refinery products became miserable.

In the following years, Rockefeller moved to control more of the entities that he needed to move his products and were an expense to his company including conspiring with railroads on pricing and taking control of potential transportation threats such as the pipelines. Initial attempts to form a cartel with other producers to control prices failed but he moved to control the market for his products in states through a trust arrangement. He was in control of the trust and would have been in control of the cartel had the plan between the group of refiners and the railroads succeeded.

It was only in the years after the trust was formed that Rockefeller moved toward vertical integration of his company. This was a move to ensure an ample supply of oil at
stable prices that he would need for his refineries. He already controlled the horizontal aspects of his industry, refining, transportation and distribution through his previous actions.

Drexel, Morgan and Company

The federal government reentered the national banking system for the first time since the lapse of the Second Bank of the United States in 1836 during the Civil War by enacting the 1863 National Banking Act (Hughes & Cain, 2003). The United States banking system that existed was a dual system of banking, national banks and state banks; a system that was not conducive to lending to large companies. The national banks were limited to single locations and state banks could only circulate their own notes. The initial reaction of state banks to becoming part of the national system was scanty until the federal government raised the tax on bank notes from 2 percent to 10 percent. State banks found a way around the tax, however, by not issuing notes, instead using demand deposits and, as a result, they proliferated in number after 1870. The banking problem, in effect, created high finance in the form of investment banks. The most important investment bank of the late 1800s was Drexel, Morgan and Company which in 1895 would become J. P. Morgan and Company.

The beginning of the greatest bank of the United States was not in the United States, but England (Chernow, 1990). It was here that George Peabody, an American dry goods merchant, founded Peabody, Riggs and Company in 1838 as a merchant house trading in dry goods and financer of trading. There was a good reason for
Peabody to be in England because it was the English who were the primary source of funds for businesses in the United States in the early 1800s.

The Panic of 1837 in the United States resulted in the five American states defaulting on their debts, much of it to English investors. The price of American bonds fell dramatically; however, Peabody was able to use bribes in Pennsylvania and Maryland to have legislators elected who were able to restart interest payments on the bonds. Peabody made a fortune as he had bought the bonds when they were considered of little or no value. The revolutions which started in Europe in 1848 made investments in the United States seem even more attractive.

Peabody did not have any legitimate heirs to leave his business so he relied on his Boston associate to recommend a successor. The associate recommended his junior partner, Junius Spencer Morgan. Peabody promised Morgan that he would leave him his company if he remained with the firm for ten years. Moran accepted the offer and moved to London as Peabody’s partner in 1854 and took over the business in 1864 although Peabody reneged on his promise to give Morgan the company name, the company now became known as J. S. Morgan and Company.

Junius Morgan’s son, J. Pierpont, began his banking career as the American associate for Peabody’s company in 1861 with his own firm named J. P. Morgan and Company. Pierpont was more adventurous than his father, taking financial risks although he made tremendous amounts of money doing them. This worried his father who arranged for Pierpont to become a partner in a firm named Dabney, Morgan and Company. Dabney was a much older man that performed as substitute parent to watch over Pierpont for Junius who remained in England.
The two Morgan companies came together at a fortuitous time in United States history. It was the time of the emergence of railroads and industry that required capital in amounts far greater than could be obtained through wealthy individuals or families. The needs of both brought them together to the degree that they were intertwined in their business operations. The instability of the business environment was such that eventually much of industry came to be owned by the banks.

The banks of the era appeared to operate as a cartel, not poaching customers from other banks or advertising their prices. Businesses could only become customers of a bank after being referred by existing banking clients and having clearance from their current bank. The result of these actions made businesses subservient to banks, a situation in which many governments would also find themselves.

J. P. Morgan’s first venture into the intertwining of banks and businesses began with the small Albany and Susquehanna Railroad in New York (Strouse, 1999). The railroads value was not in itself, but rather its connection to four other railroads that were links between the Pennsylvania coalfields and New England. One of the railroads was the Erie Railroad, run by Jay Gould. Gould did not want his chief competition, the New York Central to control the connecting Albany and Susquehanna. By chance, Morgan had arranged a mortgage for the railroad and did not want it to fall into Gould’s control. The fight for the railroad, both legal and hand-to-hand, eventually resulted in Morgan’s control of the railroad and on its board of directors.

Dabney retired in 1871 and Junius sought another older man to partner with J. P. to keep him under observation. At the same time, Junius was approached by Anthony I. Drexel, a leading Philadelphia banker, to affiliate his bank with that of the Morgan’s.
Pierpont, ever the dutiful son, met with Drexel as his father requested and he and Drexel formed companies for Philadelphia, Paris and New York. The New York firm was to be called Drexel, Morgan and Company.

The new company found an opportunity to move into the position of a major banking entity in 1873 when the federal government decided to refinance $300 million in bonds left from the Civil War at lower rates. Jay Cooke had been a favorite of Abraham Lincoln since raising funds for the North during the Civil War. Cooke, however, was now in financial difficulty after heavily investing in the Northern Pacific Railroad in 1869. His misfortune gave others the chance to bid for the federal government refinance. Morgan’s banking group competed with Cooke’s group for the refinancing with the result the bond issue was split between the two groups.

Later in 1873, Cooke’s financial collapse precipitated the Panic of ’73 causing the failure of five thousand firms and fifty-seven Stock Exchange firms. There is profit to be made in confusion and J. P. Morgan did just that – he made over $1 million in 1873. The elimination of Cooke left only the Drexel, Morgan firm at the top of the banks. The cataclysmic event did, however, change J. P. Morgan. He would no longer be the risk taker of his youth; he now wanted only sure things.

The railroads were still in turmoil in the mid-1870s when Junius warned the Baltimore and Ohio Railroad that their rate wars were undermining investor confidence. By the following year, the Erie Railroad had gone bankrupt and stockholders demanded a “voting trust” to run the operation. When Pierpont took over the “voting trust”, he propelled himself to “America’s most powerful man, placing much of the country’s railway system under his personal control” (Chernow, 1990, p. 38).
The awkward banking system that existed after the Civil War clearly had a dramatic impact on the means businesses used to obtain funds for large capital projects. The transcontinental railroads had government funding in an environment that made it easy to misappropriate large amounts of funds. This action eventually led to them being overleveraged and susceptible to failure or capture by other railroads and eventually Morgan’s bank. The same was true of the telegraph companies as well as numerous other smaller companies. Each financial panic became a buying opportunity for companies that survived and also eventually, the banks. The entire period of time from the end of the Civil War until the 1890s was a process of the financing and creation of companies that survived from one financial panic to another. The environment of success was one where one company came into a position of power and could control competition and eliminate risk. This situation was one sought by the leaders of the surviving big companies and certainly J. P. Morgan who eventually controlled a large number of companies specifically for that purpose. A business environment that had limited risk was what investors sought and was the environment that J. P. Morgan sought to provide for them. He was obviously very successful in this endeavor.
CHAPTER 5
ANALYSIS

The United States was a country that was experiencing social change before the beginning of the Civil War, but experienced even more revolutionary change after the beginning of the Civil War. Prior to the Civil War, the United States was a country of primarily small, isolated communities with small businesses but, in the period of time after the Civil War, big businesses emerged which dominated many industries.

The hypotheses of this study assert that the actions of big businesses themselves were responsible for their emergence and continuation as part of the United States economy. This assertion, however, does not ignore other factors that impacted the emergence of big businesses, some of which have been presented by researchers of big businesses as the reasons for their emergence.

The culture of the United States played a critical role in the formation of the businesses in the United State, both before and during the time period of this study. There were specific, cultural beliefs of the populace of the United States that provided the basis for the actions of those who desired to create businesses and those who supported their efforts.

The laws of the country, and the interpretation of those laws by courts, also had a dramatic bearing on the development of businesses as did the different levels of government that administered those laws. The laws also impacted the relationship between businesses and their workers and, at later time, the unions that were created by the labor of businesses.
Cultural Impact

The culture of early America centered on beliefs of individualism and democracy (Blackford & Kerr, 1994). Americans also believed that business should function to enlarge the wealth of the people, not the power of government. They did believe that the government should have policies directing the economy to augment the numbers of propertied, independent citizens.

The newness of the United States with abundant natural resources and the restlessness of its population nurtured the attitude of individualism (Buder, 2009). The perception of unlimited opportunity led Americans to prefer risk to security and stability. There existed a belief that poverty and economic inequalities as well as the social position one was born into was not everlasting and could be altered and reformed. A prevailing belief “was that it was possible for nobody to become a somebody, to make something out of nothing, to acquire property and safely enjoy it” (p. 52). The fundamental beliefs of Americans were ones that encouraged and celebrated entrepreneurship and success. Those that succeeded were viewed with admiration as long as it was perceived they succeeded within the bounds of fairness.

Another characteristic of American culture that was freed from traditional constraints was the desire to fulfill wants (Ingham, 2008). The belief in individualism not only freed individuals to achieve great things from the aspect of production, but also gave them the right to enjoy the fruits of their achievements by means of possessions. The attainment of goals, production or consumption, was the driving force of the American economy.
The social and economic system that existed in the United States was one in which capitalism could thrive. The core concepts of capitalism of private ownership and the control of the means of production fit well with the core ideas of the American culture. Capitalism is not a static system and changes over time with its environment. This was the situation in the United States which was rapidly changing as it acquired new lands and had a tremendous increase in population. These and other factors meant businesses had to change as well and adapt to their new environment if they desired to be successful.

Capitalism flourished in the United States, thanks to the underlying American cultural beliefs of individualism and the admiration of those who succeeded in business. There was also the perception that business built character and improved the individual (Blackford & Kerr, 1994). It was also believed that success in business meant the individual was honorable, trustworthy and had integrity. This cultural milieu was the environment which supported the expansion of the American economy and the emergence of big businesses in the second half of the nineteenth century.

The importance of culture in the emergence of big businesses can easily be construed from the information presented. Cultural beliefs of individualism and democracy made the acquisition of goods a positive indicator of success. This created a demand for goods that allowed capitalism and some businesses to prosper which incented others to try their abilities at creating a business. The crowding of businesses in the same industry meant competition and this competition frequently triggered acquisitions and mergers that resulted in the formation of big businesses.
Legal Framework

The legal framework for business operations in the United States is contained in the Constitution which is itself a reflection of the culture that existed at the time it was constructed (Hughes & Cain, 2003). A prime example of the continuation of rights from the time of the Constitution to the middle 1800s is property rights, rights that were virtually unchanged by the American Revolution.

The real property rights included ownership by purchase that were perpetual, the rights of both buyer and seller were fixed and certain, land could be inherited and ownership of land also meant ownership of subsurface resources. The form of ownership in the United States was almost perfect for free-market capitalism. The rewards of economic activity related to property and production i.e., the buying and selling of commodities, had very few restrictions. Property could be sold, leased, subdivided or combined with other properties and water and mineral rights could be owned separately. There was little in this type of ownership that would pose barriers to economic development.

Commercial law, the rules by which businesses dealt with each other, evolved separately from other branches of law (Hughes & Cain, 2003). The laws that did exist involved the rules of negotiable instruments and shipping. As the economy of the United States grew, however, there were conflicts between state laws. Eventually, the Supreme Court began to use its power to enforce the concept of a single national market. The Supreme Court exerted its powers early in the nineteenth century to protect its position as superior to states and to separate it from the other branches of federal government.
Most states gradually changed their contract laws from laws that had the community judging the fairness of contracts to the philosophy of “caveat emptor”, a situation where the customer determined the fairness of prices. Businesses could sell their goods at whatever price the market would bear and not fear action on the part of government to intercede. This allowed businesses to reap substantial rewards when items they sold were scarce.

The creation of the corporation allowed businesses to create legal entities that had advantages over proprietorships and partnerships. The corporation life was not limited to the life of an individual or partnership, instead it remained indefinitely. The corporation format of business also had the advantage of limiting the liability of shareholders. The requirement of having incorporations approved by state legislatures was soon eliminated thereby making the process of incorporation simple and straightforward.

The legal framework of the United States was very supportive of the creation of big businesses. It was easy to establish corporations which limited the liability of shareholders thereby reducing the risk of investment in businesses. There also existed rights of ownership which allowed for the exchange of property with the guarantee the purchaser could maintain possession. Businesses were also able to conduct business across state lines with the knowledge that conflicts between states would be decided by the Supreme Court. A very important advantage of the legal framework was that it allowed businesses to purchase underground resources without having to own the land where the resources were located.
Political Factors

The “police power” of a government gives it authority to maintain peace within its jurisdiction, which would include businesses. Although the federal government’s attempts of using “police power” in business operations after the Civil War were thwarted by constitutional and political disputes, this was not true of state and local governments (Blackford & Kerr, 1994). Their actions were a critical aspect of the inception and growth of businesses in many parts of the country.

The ability of the federal government to intervene in business situations was limited in part due to the tendency of federal law to give wide latitude to entrepreneurial talents and its support of the rights of individuals to gain, hold and use property in order to earn profits (Blackford & Kerr, 1994). The federal government, both during and after the Civil War, did become active in supporting some businesses, specifically those in transportation and communication.

Local businessmen often used their position and money to influence state and local governments to assist in obtaining whatever they wanted. If the politicians believed a particular project was critical to an area or the state, they would usually respond with assistance. The absence of constitutional restrictions gave state and local governments the ability to aid entrepreneurial endeavors that were perceived as beneficial to the group of people served by the government entity.

The aid provided by the state and local governments took several forms (Blackford and Kerr, 1994). Many of the early canals and railroads were built as public works. The governments were also partners with private funds in the building of some projects as well. The building of the Erie Canal was financed by New York since private
investors would not invest in what was perceived as a risky project. The cost of the canal was ten times the capitalization of the country’s largest existing manufacturing business.

Cities played a pivotal role in the construction of the earliest railroads. One of the first railroads, the Baltimore and Ohio, was financed by Baltimore as a means of competing for business against the Erie Canal which carried cargo to New York. As with the Erie Canal, private investors would not invest in the risky venture. The same type of public funding arrangements could also be found in the South where railroads were needed to transport cotton crops.

The funding by local and state governments for railroads paled in comparison to the financial assistance of the federal government to the transcontinental railroads (White, 2011). The federal government was desperate to extend railroads to California as a means of connecting the country and enacted legislation in 1862 and 1864 to create the two railroads which would connect. The Union Pacific Railroad started in Omaha going west and the Central Pacific Railroad started in Sacramento going east. The estimated cost to the United States government was $120 million not counting millions of acres of land given to the railroads.

Governments at all levels were important in the emergence of big businesses. Local and state governments were early financial supporters of canals and railroads and the federal government began supporting the transcontinental railroads in the 1860s. Although the federal government was not generally involved in business via “police powers”, this was not true for local and state governments who frequently intervened in business operations when it felt necessary to protect their interests.
Labor Relations

The beliefs of individualism and work, as well as the rights of real property held by most Americans, were key reasons that most Americans were hostile to organized labor (Hughes & Cain, 2003). This was despite the fact that the United States had more strikes and workers injured or killed between 1876 and 1896 than any other nation (Blackford & Kerr, 1994).

The rapid industrialization of American businesses left employer and workers confused about the power to control work conditions. Business had the most control of the workplace, but this only served to cause disputes and even violence. Many in the workforce believed that industrial workers were being exploited so that investors and managers could live in splendor. The level of worker irritation reached such a high lever that, by 1866, there was an attempt at forming a national union.

The National Labor Union had some success in lobbying the federal government; it did obtain the eight-hour day for government employees and had similar success in some states as well, but it was destroyed by its efforts at forming a national political party in 1872. The attempt at creating a national union was not abandoned, however, as the Knights of Labor was formed in 1869.

The Knights of Labor’s goals were more ambitious than those of the National Labor Union; they wanted to change American society by abolishing capitalism (Blackford & Kerr, 1994). The union grew during the 1870s and 1880s with their themes of eliminating the wage system and reordering society around cooperative principles. The union won some important strikes but, by the late 1880s their power had waned and they rapidly disintegrated.
The year of 1886 was a pivotal one for organized labor as it was known as the year of strikes and violence (Hughes & Cain, 2003). It was the year of the Haymarket Riot in Chicago where a number of workers and policemen were killed at a congregation of striking workers who were on strike against the McCormick Harvesting Machine Company. It was also the year that the meatpackers’ strike took place in Chicago and a national strike by railroad coal handlers. It was also the year the American Federation of Labor (AFL) was formed.

The AFL was an entirely different union than the Knights of Labor. The AFL was restricted to craft workers and specifically was organized to seek control of the work place by concentrating its efforts on improving working conditions, wages and hours (Hughes & Cain, 2003). This was the complete opposite of the utopian goals and inclusiveness of the Knights of Labor.

Businesses countered the labor movement by obtaining court injunctions based on the premise of protecting property and relying on the Sherman Antitrust Act that outlawed strikes as restraint of trade. Businesses often appealed to and received assistance from the federal government in ending strikes. This was despite the fact that strikers frequently had the support of local governments.

The often harsh conditions of work and long workdays motivated workers to try and improve their work life even if it was in conflict with own ideas of individualism and work ethic. This was a problem for businesses as well since many businesses were now operating complicated equipment that required skills that might have been difficult to find and employ. The strike would also affect business output as well as profits. Both sides had much to lose when strikes occurred.
Analysis Summary

The topics in this section, culture, law, polity and labor relations all had to be in the right balance for emergence of big businesses. In this case, the law and polity were created to reflect the culture of American society, an admiration of individualism and success. As noted, America was perfectly suited for capitalism.

These features existed in American society before and after the emergence of big businesses, yet big businesses did not exist prior to the Civil War. This means something happened during the period of time examined in this study that was new or different. The hypotheses in this study assert that this difference was the actions taken by businesses.
CHAPTER 6
CONCLUSIONS

This aim of this study was elucidate what actions businesses took to become big businesses and remain big businesses during the period from 1861 to 1890. The big businesses chosen for this study are some of the best known big businesses of the era and represent the industries in which big businesses emerged during the period of time between 1861 and 1890. The businesses or their predecessors may have been in existence prior to 1861 but their growth into big businesses occurred after 1861. The study does not present these big businesses as the only big businesses of the era but rather as representative of all big businesses of the era. A brief description of the actions taken by businesses in the study follows.

Hypothesis One Findings

Hypothesis one stated that existing businesses became big businesses after the beginning of the Civil War by internal growth and this process is explained by Marx’s theory of the concentration of capitals.

The analysis of the businesses in this study supports this hypothesis. This does not mean that every business at all times sought profit and used the profit to increase the size of the business. The railroads and Western Union are examples of businesses created by government entities to obtain a goal or provide a service with the attainment of profit a secondary objective. The businesses may not have been owned by the government entities, but their creation would not have been possible without government support of some type, typically initial funding. These businesses, or at least their
successors, did become profitable but only after forming oligopolies to support their prices and hence their existence.

Carnegie Brothers and Standard Oil, unlike the railroads and Western Union, were created by investors specifically to make a profit and they did. The businesses were very profitable as they enabled their primary founders to become the richest men in the United States and their partners to become very rich as well. The success of their businesses allowed them to dominate their industries as they were able to control prices which ensured them a profit. The prices they controlled included not only the prices they received for their products, but also prices paid for raw materials and transportation.

Standard Oil is the best example of a business created with a horizontal control structure of the businesses analyzed in this study. Standard Oil was successful in its early years of existence and very profitable. The internal growth allowed for accumulation of profits which were used to invest in additional assets that allowed the business to increase in size. The businesses success also provided capital for it to increase in size by means other than internal growth including the acquisition of competitor businesses.

The means of growing the businesses by creating profit is expressed in Marx’s (1990 [1867]) theory of capital concentration. As noted earlier in the study, Marx was specifically writing about the expanding of a capital by means of internal growth. The theory he posited was the creation of surplus value by the circulation of commodities, represented by the formula M-C-M' where “M” represents money, “C” represents commodity and “M’” represents money after the sale. In its most simple form, the
capitalist uses money to buy a commodity and resells it for more than he paid for it. In an actual business, money buys the means of production, the means of marketing the product and the means of transporting the product to the purchaser. The process is more complicated than Marx’s simple formula, but the end product is expected to be the same, profit and the growth of a business.

Hypothesis Two Findings

Hypothesis two stated that existing businesses grew in size after the beginning of the Civil War by acquiring smaller competing businesses and this process is explained by Marx’s theory of the centralization of capitals.

The analysis of the businesses in this study supports this hypothesis. Although not all businesses analysed in this study were created after the beginning of the Civil War, they all grew to be big businesses during the time period analysed in this study and they did this by acquiring or merging with other businesses that were competitors. The New York Central Railroad is a good example.

The New York Central was created by an arranged merger of smaller railroads by the State of New York. The railroads, although not competitors, could not connect thus making travel and transport difficult and expensive. Other competitors began competing services with the New York Central on the East Coast to the West and the pressures on pricing between the four railroads kept all in financial difficulties. The New York Central became profitable when it was able to gain control of its greatest competitor, the Hudson River Railroad. The combination of the two railroads created an oligopoly that was able to control prices and bring it to a high level of profitability,
especially when Cornelius Vanderbilt combined it with two of his other railroads to control railroad traffic between New York and Chicago.

The best example of a business to grow by acquisitions was Standard Oil. Standard Oil was a very successful business but by acquiring its competitors it grew to be the largest refiner in the United States within a very short period of time with almost 90 percent of the market. Standard Oil did this by either buying or forcing into bankruptcy its competition in every major refinery market in the United States. It was able to do this as capitalists were willing to make large investments in a business with a history of success. The market position gave Standard Oil the ability to set prices which enabled it to make enormous profits.

The use of acquisitions and mergers to increase the size of businesses is expressed in Marx's (1990 [1867]) theory of capital centralization. As noted earlier in this study, this process involved a capital acquiring other capitals. Marx (1990 [1867]) decided not to develop this particular aspect of capital accumulation but he noted this process “presupposes a change in the distribution of already available and functioning capital” (p. 777). Marx (1990 [1867]) also noted that this process is “not limited by the absolute growth of social wealth, or in other words by the absolute limits of accumulation” (p. 777).

The actions of the businesses in this study grew primarily by the process of acquisition of other businesses or, in the case of bankruptcy, the assets and/or customers of those businesses. In many cases, the businesses acquired by purchase were forced into this position by actions of the acquiring business. These actions included forcing competitors into a situation where they could not financially survive
either by cutting off their supply of raw materials needed for production, denying them access to transportation venues for their raw materials or products or by using its dominant position to drive down prices to levels the competitor could not match and survive. There were also situations when the dominant business, with access to capital, was able to acquire other businesses that could not access capital and could not survive an economic downturn.

Hypothesis Three Findings

Hypothesis three stated that big businesses remained so by gaining control of utilities necessary for production either through their own production of the utilities or by acquiring the means of transport of these utilities.

The analysis of the businesses in this study supports this hypothesis. This hypothesis applies to businesses that had vertical organizational structures, a type of structure that allowed business to better control their own destiny by ensuring access to raw materials needed for production and/or access to means of transportation by ownership. The industrial businesses in this study, Carnegie Brothers and Standard Oil, both had vertical organizational structures to some degree. It was later in its existence that Standard Oil, the exemplar of a horizontal organization, began to expand its control to oil producing by purchasing oil fields.

The business in this study that best exemplifies this type of organization, however, is Carnegie Brothers. Andrew Carnegie owned the business that supplied the pig iron he needed for the manufacturing of steel. He also owned the business that was the primary customer of his steel business. This was a construction business that used
steel to build bridges. The only aspect of production he did not own or have access to by contractual obligations was labor. Carnegie did, however, maintain better relationships with his workers, and later unions, than did other mills. Although Carnegie was an absent owner, his mill manager carried out his directives since Carnegie owned most of his coke business. The organizational structure worked well for Carnegie as he became enormously wealthy, primarily from the profits generated by his business that produced steel and his construction business.

As noted, the vertical organizational structure is tempting to businesses as it allows for greater control of elements of their business. The structure is not perfect as the control of resources via ownership or contract can limit the ability to seek cheaper sources of the means of production or transportation. It also means funds are diverted from the core business to obtain and operate the ancillary businesses.

Standard Oil is an example of a business that was formed as a horizontal business and was extremely successful in that capacity but later moved to a more vertical business structure. Standard Oil had its choice of businesses from which it could purchase oil for its refineries and, due to its almost total dominance in the refinery business, could set the price it wanted to pay for this oil. Declining oil production near its existing refineries enticed it to enter the oil production business to better ensure a steady supply of oil.

The concept of businesses operating with control of its raw materials and/or transportation of those raw materials is reflected in Weber’s (1978 [1968]) theory of economic rationalization. Weber (1978 [1968]) considered the acquisition of utilities i.e., “opportunities for present or future use” (p. 68) as rational economic actions since
businesses needed these utilities for the production and/or transportation of raw materials and/or products.

As noted earlier, the ownership of raw materials and/or the transportation of those raw materials can also have a detrimental impact on a business. In the case of Standard Oil, the situation changed over time so that what would have been a bad business decision early in the history of the business became a good decision later in its history.

Hypothesis Four findings

Hypothesis four stated that big businesses remained so by forming agreements with other businesses or entities to assert control over utilities when they are unable to do so themselves.

The analysis of the businesses in this study supports this hypothesis. This hypothesis applies to businesses that had vertical organizational arrangements, an arrangement that allowed the businesses to better control their own destiny by ensuring only access to raw materials needed for production and/or access to means of transportation by contract. The use of contracts for a business to control is own destiny was not as strong as actual ownership of utilities, but it was more dependable than not having any control over raw materials and/or transportation. Carnegie Brothers and Standard Oil both used contractual relationships to exert control over aspects of their businesses that they did not own.

Andrew Carnegie ensured access to raw materials he needed, coke and iron ore, by contracting with stable suppliers of both. Carnegie contracted with the iron ore
supplier before the steel mill was built as well as the supplier of coke. He also had favourable pricing contracts with the railroads that transported the finished steel (Nasaw, 2006). The success of having these favourable contracts was proven by the fact that the business was returning a 40 percent return on investment in its first year.

The contract Carnegie made for a steady supply of coke was even more secure than his other contracts as he invested in the coke business as well as making a contract with the business. In just a few years, Carnegie obtained controlling interest in the business and put the previous owner in control of Carnegie Brothers.

Standard Oil contracted for the oil for its refineries at the prices it desired to pay and controlled pricing with the railroads that transported its products. In both instances, Standard Oil was the prominent customer to the degree it could dictate the conditions of its business relationships. This arrangement worked very well for Standard Oil and it was only when it appeared the supply of oil would become insufficient for its needs that it moved to become the owner of oil production in new areas. This allowed Standard Oil to ensure a controlled pricing environment in new areas of oil discovery and avoid the problems of overcapacity and the unrestrained pricing that followed the discovery of oil in Titusville, the location of its original refineries.

Weber (1978 [1968]) was aware that there would be instances when a business could not control all aspects of its business but still had the desire to have “assured powers of control and disposal over utilities (p. 71). Weber (1978 [1968]) noted three situations that might exist when a business would contract for utilities rather than own them: the utilities were in control of others, the means of procurement were in the
control of others or a third party may have desired to acquire the utilities in order to deny them to the business.

A business might also establish a relationship with other businesses in order to ensure access to utilities. This type of arrangement, as Weber (1978 [1968]) noted, may be used to ration utilities in order to limit competition by businesses for the utilities or it may be organized as a means of a central administration over the utilities where previously there had only been chaos. This arrangement allows the business a degree of control over required utilities but also gives the business control over other businesses access to the utilities.

Conclusions Summary

The analysis of the information investigated for this study supports the hypotheses explaining what businesses did to become big businesses and remain so during the period of time studied. The analysis does not indicate that businesses did all of the actions stated in the four hypotheses to the same degree, but does indicate that the businesses in the study did most if not all of the actions specified in the hypotheses.

Marxian and Weberian theories explain actions businesses took to become big businesses during the period of time examined in this study. They grew as described by Marx's (1990 [1867]) theory of capital accumulation where a capital created internal growth by the cycle of money and commodities or created growth by the acquisition of other capitals. As per Weber's (1978 [1968]) theory of economic rationalization, big businesses remained so by procuring the sources of their raw materials and means of transportation by ownership or by contract or agreement.
REFERENCES


