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Geographic scope, scale, and local social structure:

Survival of chain and independent retailers in California, 1990-2004

by

Nydia Marie MacGregor

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of the

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Committee in charge:

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by Nydia MacGregor

Abstract

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Nydia Marie MacGregor

Doctor of Philosophy in Business Administration

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Professor Heather Haveman, Chair


This dissertation examines the effects of governance structure, size and local social structure on the survival of retail establishments in California between 1990 and 2004. Firstly Chapter Two integrates ideas from economic history, urban studies and the culture of consumption to explain the importance of the retail system in the United States. The chapter paints a picture of a retail system positioned at the intersection of commerce, culture and community. The next chapter, using ideas from organizational ecology, proposes hypotheses to explain the differential survival rates of independent retailers (with a focused geographic scope) and chain retailers (with a broader geographic scope). I also predict the separate effects of firm size from establishment size for each of these categories of retailers.

Retailers, however, are not one-dimensional organizations. Other considerations besides geographic scope inform how owners and mangers organize their firms. One of these is product breadth. Chapter Four tests the predictions that when independents also commit to a single product category, they survive longer than single-category chain retailers, multi-category chain retailers, and multi-category independent retailers. Finally, considering the position of independent retailers in their communities, Chapters Four and Five propose that local social and built environments positively influence the survival rates of independent establishments. Independent retailers are likely to be a part of the local social fabric and as such benefit from distinctive local character like urbanness, wealth, and racial and age homogeneity. Additionally, independent retailers participate in local logics of action and thereby benefit from historical urban planning arrangements.

The hypotheses are tested with an extensive dataset covering fourteen years of life histories of Californian retailers. . My findings indicate that local economic and social factors influence the survival of independent, whereas not for chain stores. The results suggest that the larger the scale of an establishment the longer the survival time for a chain store, but not for an independent. Being a multi-category is of particular importance for independent stores, but not chain stores. The findings also support the hypotheses about local development patterns and the survival of independent retailers. The findings offer

important contributions to our understanding of the relationships between the local social structure and organizational survival and the multi-dimensional nature of organizations and their survival.

Dedicated to

John H. Freeman because I was the last;
to Dad because I miss him;
and to my girls who play in the sunshine.

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This entire dissertation and, by extension, my research program would never have existed were it not for Professor John Freeman.  Being an old-school sociologist, John never tired of talking about the connections between organizations and the communities in which they reside.  He was a storyteller at heart and for him each research project comprised a cast of characters, plot and denouement that he successfully quantified.  His unfortunate passing in 2008, left me with his singular voice echoing in my ears and resonating on the pages of this document.

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Finally after all of the colleagues and friends are named, I'm left with the hardest task of all: acknowledging my husband's priceless comfort and partnership. The list of credits due to him is too long to enumerate.  I'll be short.  Like everything else in my life, Nat owns half of this, too.

In spite of all this good assistance, any and all errors are mine alone.

# Table of Contents

# Chapter 1: Introduction

The following six chapters inform our understanding of the contemporary retail systems in the United States. Firstly the background chapter integrates ideas from economic history, urban studies and the culture of consumption to explain the importance of the retail system. The next three chapters propose hypotheses to explain under what conditions independent retailers (with a focused geographic scope) survive better than chain retailers (with a broader geographic scope). The hypotheses are tested with an extensive dataset covering fourteen years of life histories of Californian retailers. The findings offer important contributions to our understanding of the relationships between the local social structure and organizational survival and the multi-dimensional nature of organizations and their survival.

Chapter two provides a background on the retail system in the United States. Tracing the history of retail from the colonial era through the contemporary period, the chapter connects the developments of retail with the economic, technological and social changes that have taken place of the last 400 years.  More importantly, the chapter paints a picture of a retail system positioned at the intersection of commerce, culture and community.

Chapter three examines the different tradeoffs that retail organizations make, attempting to ensure their long-term survival. Previous literature on retailers has focused on chain stores as conduits for learning (Bradach 1997; Ingram and Baum 1997; Sorenson and Sørensen, 2001), signals of credible commitment (Ingram, 1996), and instantiations of distant, powerful actors (Ingram and Rao, 2004). I develop hypotheses informed by organizational ecology to explore the competitive dynamics between independent and chain stores and explain the conditions under which the underdogs, independent retailers, experience enhanced survival times in spite of chain stores.

Independent and chain retailers are organized differently and as a result they draw their resources, and therefore strength, from different areas. Since chain retailers benefit from a lower cost structure, use resources drawn from their headquarters, as well as those from their local areas, in general, they will have higher survival rates than independent retailers. Retailers, however, are not one-dimensional organizations.  Other considerations besides geographic scope inform how owners and mangers organize their firms. One of these is product breadth. When the different dimensions of an organization are consistent with one another, organizational survival should increase. Following this insight, I predict that when independents also commit to a single product category, they survive longer than single-category chain retailers, multi-category chain retailers, and multi-category independent retailers .

Chapter four focuses on the influence of social structure on the survival of chain and independent retailers. Extant research has demonstrated that social structure, like friendships and long-time colleagues (Uzzi, 1996; Ingram and Roberts, 2000) provides valuable resources for organizations, which result in positive organizational outcomes. Through these social connections flow information, access, opinions and approval. Independent retailers are more likely to be a part of the local social fabric since their entrepreneurs usually come from the communities in which the establishment operates (Lebhar, 1956).  I predict that the survival of independent retail organizations will improve in areas with special social arrangements to which chain retail organizations have no

access. These special social structures have no influence on the survival of chains establishments.

Chapter five invokes the cultural-cognitive function of institutions (Scott, 1995) to suggest that urban development patterns structure the logic and actions of actors. Logics of action shape social structure (like interpersonal networks) and create lasting organizational outcomes (Kono, Palmer, Friedland and Zafonte, 1998; Marquis, 2003). These patterns are idiosyncratic to local history and geography and endure for long periods of time. Since independent retailers are more likely to be embedded (Granovetter, 1985) in the local social milieu than chain retailers, they will benefit from the knowledge and use of the local logics of action. In communities where the historical development patterns were established before the advent of the car, independent retailers survive longer. There is no effect for chain retailers.

I test the hypotheses developed in chapters three, four and five using data on retailers in California. The data I analyze include more than five million establishment-year observations over a fourteen-year period. Analyses show that when considering only a single dimension, chain or independent, chain retailers out-survive independent retailers. The scale of the establishment also contributes to extending the life of chain retailers, but not for independents. Multi-category independent retailers survive longer than single-category independent retailers. Additionally, the survival of independent retailers improves with certain types of local social arrangements, whereas local social structures are largely meaningless for chain retailers. The findings also support the hypotheses about local development patterns and the survival of independent retailers.

Chapter seven of this dissertation concludes with a discussion of the contributions of this research to our understanding of the survival of retailers and under what conditions independent retailers have improved survival rates. It concludes by identifying areas for further research.

**Chapter 2: Significance of the retail system in the United States**

The retail system comprises four parts: production, distribution, promotion and consumption of goods. It is the system that creates and then conveys to individuals and households the goods they use. Retailers both distribute and promote the goods for sale. They meet buyers in fixed locations - in stores - and it is there that buyers enact the final step in the retail system, consumption. In this way, retail stores house the marketplace in the United States. In this vital position, retailers shape the patterns of our economy, social life and arrangement of commercial places and quotidian experiences. Even those who would like to opt out of the retail system have found it unavoidable (Levine, 2006); it knits the very fabric of American life.

Large numbers of workers, firms and individuals contribute to the maintenance and proliferation of the U.S. retail system. So many are involved that scholars describe the critical elements of the system as massive. We speak of mass production; mass distribution; mass promotion and mass consumption. But what does this mean?

There is no consensus among scholars and critics as to what specifically defines mass production, distribution, promotion or consumption. To begin, manufacturers, that is producers, turn out consumer goods in quantities never before known to the world, and (thanks to economies of scale) for comparatively cheap prices. Besides the great number, the variety of goods is also tremendous. There are not only products that did not exist a generation ago (like laptop computers and cellphones), but also highly differentiated products in mature markets. Think of the number of coffee varieties that are available in a typical grocery store or the dizzying number of pens at an office supply store. These goods are world travelers, being manufactured across international borders and transported to the U.S. by freighters and cargo planes. But mass distribution also describes the number and location of outlets parceling out the goods, not just the physical distance between manufacturer and retailer. Consumer goods are distributed widely across American social spectra and geography, to stores in urban and rural America, for the rich, the middle-class and the poor. In sum, the initial elements of the contemporary retail system, production and distribution, occur at an unprecedented scale and scope; a massive number of goods for many millions of people.

Promotion refers to the level of publicity and knowledge of consumer products that manufacturers and retailers create among consumers. Contemporary promotional efforts reach American consumers at an exceptional volume and pace. A variety of media like direct mail, television and radio advertising, and placement in movies or with entertainers, persistently raise consumers' awareness of goods. In fact, there are few surfaces in public and private life that have not been used for product promotion, including the reverse side of receipts, textbooks and bathrooms, to name a few unlikely places. These efforts keep Americans well informed about prices, options and functions for new, updated and differentiated consumer goods. Manufacturers and retailers collaborate to seamlessly use a range of merchandising techniques, from elaborate to simple. Regardless of tactic, each package and display espouses the benefits and fulfillment the product manufacturer claims will be delivered. In the final stage of the retail system, Americans across the social spectrum are shoppers, not buyers. Buyers purchase necessities, judging if goods will meet their needs. In contrast, shoppers evaluate goods to maximize the value they will receive from the transaction (Cohen, 1999). They purchase luxury goods to fulfill desires, not needs.

The level and nature of consumption in this system allows anyone to be a shopper by distinguishing and valuing luxury goods.  Just as importantly, American shoppers are not a homogenous group (Cohen, 2003).  In fact, it is the multitude of segments that husbands such broad participation by consumers.  Differentiated products, tailored to the desires of consumers with similar socio-economic and psychological characteristics, encourage more shopping in total and less competition among similar products.

Linked together, these four stages of the system offer choice and convenience on a scale that dwarfs what was available even a generation ago. In the contemporary retail system, the scale and scope of production, distribution, promotion and consumption mean that more people participate and there are a greater number of choices of how and where to spend money than ever before. This immensity of the retail system weighs in to significantly influence on the economy, society and the character of our physical surroundings.  Below, I discuss each in turn.

## 2.1 Economic significance of the contemporary retail system

Retailers provide the opportunity for consumption, which has been theoretically important to economists at least since Adam Smith (Heilbroner and Malone, 1986). Smith's aphorism "Consumption is the sole end and purpose of all production..." (p.284) indicted the mercantile system and shifted consumption to the object of all industry and commerce. By the time of the Great Depression in the 1930s, Keynes elevated consumption to a necessity. Not just an end, consumption, he declared, was the means by which to preserve and sustain our economy during those dark times (Zukin 2004). The sentiment stuck and remains the contemporary view of the role of our retail sector.

Quantitatively the retail system is a large and influential part of the economy of the United States. In 2002, there were more than 1.1 million retail establishments in the United States. At the same time, these retail establishments provided over 14.6 million jobs, representing 14% of the non-government workforce (Federal Reserve Board San Francisco, 2004). This means that almost three in 20 Americans works in a retail establishment. Besides being a large source of employment, the retailing contributes to the overall success of the US economy. In 2010, U.S. retail contributed 5.9% of US gross domestic product (US Bureau of Economic Analysis, 2011).

Heightening the importance of the role of the retail system is the level to which observers attend to the success of retailers as harbingers of the health of the entire US economy. The media provide a constant stream of coverage on the health of the retail system along with prognostications about the likely economic consequences of the strength of retail. For example during the recession of 2007-2009, the New York Times headlined "The Engine of the Economy Stalls" (Leonhardt, 2008) above a graph illustrating the change in consumer spending. The message was simple: The poor condition of the US economy follows the poor condition of the retail sector. Moreover, government, and business leaders use the level of near-term likely retail sales to determine comprehensive policy and investment decisions. As an example, the results of the Consumer Confidence Index (a measure of consumer optimism and thereby future retail sales) influence the actions of the Federal Reserve Board (when setting interest rates) and the volume of stock market transactions. There is a ripple effect. It is not only that retail is an important sector of the economy, but also the attention that it garners determines how important others choose to act, magnifying the economic influence of this one sector.

## 2.2 Sociological significance of the contemporary retail system

Sociologists see economic actors in a social context (Granovetter, 1985). People engaged in economic activity are influenced by their social circumstances, and in addition to economic outcomes, there are also social outcomes deriving from the nature of economic relationships. From this point of view, the series of exchanges that occur in the retail system also transpire within the social fabric. Although any economic exchange occurs within a social context, the retail - that is the exchange between producers and distributors, on the one hand and shoppers on the other - is so significant, it builds and shapes our social structure and influences what society as a whole treasures. To be specific, the retail system distributes status, creates value and enhances or destroys the sense of connection in a community.

*2.21 Status*

Even in its nascent stages, the retail system generated status. Veblen (1925) observed distinctions between nineteenth-century American social classes based on their consumption of goods. Specifically the leisure class, the stratum of people in positions of power used the consumption of luxury goods to announce their social standing. For that, Veblen labeled the leisure class guilty of conspicuous consumption. Indeed, the promotion tactics used during Veblen's lifetime aimed to endow status to leisure-class consumers. For example, early department store managers constructed the consumption of luxury goods as being for those with "style, respectability and urbanity" (Benson, 1986, p.36). This message drew members of the leisure class and anyone aiming for that standing to department stores. It also educated middle and lower class individuals as to how to recognize members of the leisure class. In that respect, production, promotion, and consumption worked in concert to solidify class distinctions. For conspicuous consumption to effectively endow higher social status, individuals must declare their class affiliation using luxury goods and observers must correspondingly recognize these claims. In sum, production of consumer goods, promotion of those goods and consumption by the leisure class contributed to elevating and reinforcing status of the leisure class and those aspiring to be viewed as part of it.

More recent critics have challenged Veblen's simple view of the relationship between income level, type of consumption, and social position. A more refined approach focuses on acts of consumption to match lifestyle and desires. Lifestyle definitions, usually delineated by demographic (age, race, gender, education) and psycho-graphic attributes (interests, activities, opinions), refine the categories previously used to distinguish among income classes. Consumers affiliate with a lifestyle (Cohen 2003), such as "active senior citizen" or "African-American DIY enthusiast", via purchases. For example, choosing a Chevy Tahoe versus a Toyota Prius or the Economist versus Time magazine suggests a certain education level, political affiliation, and parenting choice. In this way, consumption transmits class identification to others, but is not confined to strict income-level categories. Moreover, this view of consumption suggests that actors are not cultural "dopes," but rather they select goods on the basis of their own perception of their identity and thereby transmit their position in society (Crane, 2000). Ultimately, people fashion their identity via their buying choices, not their acknowledged societal roles as professionals, neighbors, or parents (Leonard, 2010).

Moreover, the transition from rural roots to an urban society[1] has increased a sense of alienation and heightened the difficulty for people to know the character of those they meet. In a more urban and therefore more anonymous society, individuals' outward appearance and behavior provide clues to their character. Consequently, we use goods as a means to demonstrate to others what to expect from us (Susman, 2003), constructing and reconstructing ourselves at will. Identity is variable. The contemporary retail system, which defines which goods are produced, how they are promoted, and where they are sold, makes this possible.

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[1] Beginning with the Census of 1920, the United States has had more urban dwellers than rural ones. The percentage has held steady since 1990, with 75% of US residents residing in urban areas (U.S. Census, 1990).

*2.22 Values*

Although Adam Smith declared consumption central to our economic system in the mid-seventeenth century, it took 200 years to make us consumers. Even at the time of Adam Smith's declaration, the word consumption meant to exhaust or to waste and commonly carried a negative connotation (Williams, 1999). It was only at the mid-point of the twentieth century that the word consumer entered into popular use with a positive connotation. As Americans' values shifted from Puritan ones of thrift, work, and patrimony to expenditure, pleasure, and impulsiveness (Baudrillard, 1999), there was broader acceptance of consumption. Concurrent to these changes, judgments about buying goods for vanity, self-indulgence, or short-term gain transitioned from negative to positive. Whether the retail system caused this shift in values is up for debate. However, the retail system that blossomed over the last 300 years provides and promotes easily accessible, inexpensive goods that reinforce the worthiness of consumption.

The promotional activities associated with the retail system shape commonly held ideals, which is advantageous for the reproduction of the entire retail system. Beginning in the middle of the nineteenth century, retailers and advertisers standardized the measures of beauty and taste (Leach, 1994). In the halls of early departments stores, customers received an education of sorts about appropriate dress for themselves and their families. Displays and eager sales clerks were critical in this role. This was especially true for the emerging middle-class who streamed to department stores (Frieden and Sagalyn, 1991). These largely middle-class, largely female shoppers learned what attire and necessary accessories were seemly and appealing for any occasion.

In the contemporary period, in addition to retail stores, magazines, radio, movies, and advertising all support this educational effort. Whether a good is practical is not a chief consideration. We acquire what we think is "best," using criteria built, shaped and supplied by the contemporary retail system, no longer by religion, work or politics (Zukin 2004). Style and elegance trump function and outwardly express an individual's tastefulness. Promotion defines pulchritude and luxury, training consumers in the discernment between the mundane and the desirable.

Besides the dictates of fashion, the retail system encourages adaptation and adoption of technological innovations, even if the innovation does not necessarily result in an improvement in our quality of life. Promoted as efficient, efficacious and modern, new technological developments furnish an opportunity to transform standards of hygiene, privacy, and social interactions to encourage additional consumption. Vacuum cleaners, washing machines, shampoos, and hair conditioners each could have just changed the usual cleaning routines. Instead, the promotion and distribution arenas in the retail system market new technologies to displace previous norms of bathing and cleaning (Cohen, 2003) and ensure the consumption of new products at an increasing rate. For example, most mainstream Americans expect individuals to wash their hair with shampoo daily and to follow with conditioner and styling products. Yet that practice dates back only to the 1970s when TV advertising by Breck and Faberge (Aubrey, 2009) advocated for washing that frequently. Previously, washing one's hair once a month was the accepted norm. By the same token, vacuuming weekly usurped beating the carpet twice a year. Just as importantly, these innovations and follow-on norms have not reduced the time dedicated to household chores or personal hygiene, but rather have increased it (Cohen, 2003).

In many societies, goods, when exchanged as gifts, also convey the value individuals place on the relationship between exchange partners (Caplow, 1982; Camerer, 1988). This is also the case in the United States where the size, expense, and beauty of a gift is a proxy for the level of commitment or affection of the giver. The retail system has heightened and expanded the value and meaning Americans attribute to gifts. Diamond engagement rings are a salient example of how producers, promoters and retailers participate to transform an age-old custom into one that increases the reliance on consumption and elaborates the attributions of the worth of consumer goods.

Engagement rings were not invented by players in the retail system. However, the tradition of giving a diamond engagement ring began in this country beginning in the 1930s. At that time, suffering from a oversupply of South African diamonds, DeBeers Diamond Jewellers launched an advertising campaign promoting diamond engagement rings as the standard gift from husbands-to-be (Epstein, 1982). Additionally, DeBeers's advertising agency persuaded movie actresses to wear diamond rings and movie producers to include scenes where a surprised young woman receives a diamond solitaire along with a marriage proposal. These efforts cemented the diamond-engagement-ring standard and sales soared. Between 1938 and 1941, diamond sales rose 55 percent (O'Rourke, 2007). DeBeers maintained its promotional efforts, including the influential "Diamonds are Forever" slogan launched in 1947 (Epstein 1982, O'Rourke 2007), which made it into the cultural lexicon as a title for books, songs and films. The success has been phenomenal. Current estimates are that since 1965, over 80 percent of American women receive diamond engagement rings (O'Rourke, 2007). The coordinated efforts between producers and promoters helped to define the value attributed by average Americans to diamond engagement rings. Future husbands demonstrate their own worth, love, and commitment in proportion to the expense of the engagement ring. Although this example may appear extreme or unique, it is reasonably generalizable. The same mechanisms used by De Beers are common and regularly exploited to influence the worthiness and desire for goods (Gitlin, 2003). Material goods are the legitimate and best expression of love and commitment between intimates.

The retail system, in addition to defining value, instructs Americans how to interpret the value of goods. In other words, more than just knowing how to care for our families or how to find a bargain, the system helps Americans to negotiate the layers of meanings attributed to our possessions and to navigate our social waters using consumer goods. As a result, well-informed consumers imbue goods with meaning and, by consuming, shape their individual identities and enhance (or diminish) the worthiness of familial, collegial and intimate relationships.

Above and beyond the values of consumption and its worth in our social life, the retail system also subsumed long-held American civic values. For much of our history, Americans often celebrated our material abundance (Schudson, 1999). The retail system has pushed this further, likening access to consumer goods and retailing convenience with freedom and equal opportunity, core tenants of our democratic governance. The Franklin Stove of the eighteenth century, and the Model T car of the early twentieth century were meant for everyone, as are the low-cost designer clothes of the twenty-first century. In this way, consumers equate brand names with achieving better life (Cohen, 2003). A single mom who shops at the 99-Cent store may feel proud in being able to provide toys, food, and clothes that are not second hand. Shopping affirms that she is not an outcast, but a

participant in society and thus avoiding the shame of poverty and ostracism. Moreover, not just consumers feel this way about equal access to bounty. The founder of America's largest retailer, Wal-Mart, held that freedom and equal access to a better life was a compelling mission for his company (Huey, 1993). Rather than a cynical critique, retailers embrace this noble undertaking and connect it to their own higher purpose.

But access to bounty alone would not be enough if there was no widespread purpose for it. Just so, the bounty offered by retailers provides access to the ephemeral American Dream. A dream to which we are duty bound to seek, if not attain (Cohen, 2003). Not just the dream of home ownership but also of a fully-furnished home with a modern kitchen and matching, well-dressed family. In seizing the opportunity afforded to us by retailers, Americans fulfill our civic duty and contribute to the community with a well-maintained home, garden and family (Cohen 2003). Just as importantly, in offering access to the path to the American dream and civic duty, the retail system assures its place in American society.

It may be a curse of the human condition to hunger for diversion, identity, and escape. The contemporary retail system makes it possible for the majority of Americans to live these desires via consumption. People learn to identify what is beautiful, and what conveys commitment, a social position, and taste. Moreover, participation in the retail system teaches us to live in a retail-driven market economy (Zukin 2004), reinforcing and thus preserving the system for the next generation. But, this is not the only consequence to our values set that the retail system has wrought. Our consumption choices indicate both what we actively value and what we do not. By educating consumers, the retail system elevates the worthiness of our own consumption above other activities, experiences and others.

### 2.3 The contemporary retail system and the built environment

The previous discussions about the economic and social relevance of retail lead to one conclusion: the contemporary retail system influences the very foundations of the social and economic structure of the United States. Americans most frequently participate in the retail system in stores or malls. If shopping is a significant sociological and economic activity in our everyday life, the halls of retailers shelter it. Shopping is normalcy and the experience of shopping - our experience of normal life - is made and remade by the houses of retail. Frequenting brick and mortar boxes, block-sized department stores, and tiny boutiques, Americans' shopping experience is coincident to experiencing their local communities. We enact consumption in communities and as a result retail edifices structure our common life, regulate who has access, color our experiences, and catalyze connections among us.

#### 2.31 Communities and access

In a fundamental way, retail buildings contribute to how space is carved up and how it is used in local communities. More than just the organization of fancy shops on High Street and ordinary merchants along Market Street, the arrangement of retailers in physical space can determine what else individuals do in the area that is not exclusively used for merchandising. To illustrate the point, consider malls and shopping centers that conveniently protect shoppers from the elements, but also change the proportion of private to public space actively used by the community. The mall retailers and developers define

and direct who and what a shopper sees under the mall's roof, like Christmas decorations, interior plantings, and music. They also have the purview to allow or disallow children selling candy for school fundraisers or voter registration drives. Shops around a town square also frame a very public commons, but have less influence shaping what happens outside their doors and display windows. It is the role of the municipality, not the merchants or their landlords, to issue permits for music, holiday decorations or political activity. In the first case, daily shoppers experience life as defined and designed by retailers, in the second shoppers experience the space shared and shaped by the public will.

In addition to purpose and use, there are other ways that retail buildings contribute to the physical structuring of the community. Retailers (and those who construct retail properties) influence the density of buildings, the proximity of retail to residential areas, and the distance between parking lots and the destination. There may be canyons of multi-story shops or long plains of flat-front big-box stores. The physical distribution, density, and height of retail determines whether shoppers vacillate between indoors and outdoors facing the elements and seeing other, non-retail establishments while running errands, or whether they remain in a climate-controlled space, under the same roof, encountering only store fronts. In both cases, retailers construct the stage where American life is played out. Effectively, the vision that retailers have for housing their merchandising function defines the landscape of local communities.

In addition to influencing the usage and landscape of American communities, the arrangements of retail stores reify existing social structures. Retailers match perceived community identity with a specific arrangement of retailers. The retail terrain -whether clustered or spread out, homogeneous or heterogeneous, luxurious or basic - serves different slices and combinations of community patrons. Clustering retailers together might reduce search costs, but the location and quality of retailers in an agglomeration also reflect the affluence of their customers and maintain the reproduction of the position of those customers in society. In essence, the distribution and location of retailers underscores the social value of some people and adds to the marginalization of others (Cohen, 2003). Originally, this was the key reason luxury shops opened on High Street and the shops selling basics remained on Market Street (Cox, 2000). Salient, and contemporary, examples on the other end of the spectrum are the communities known as food deserts. These are urban or rural low-income areas without access to healthy food, which may result in negative diet- and health- related outcomes (Beaulac, Kristjansson, and Cummins, 2009). The lack of retailers perpetuates the marginalization of these communities and their residents, and it also funnels the distribution of quality goods toward those who already benefit from society's favor.

*Experiences*

Architecture is where art meets life. Structures of all kinds incorporate a series of tradeoffs between form and function, space and mass, light and dark, entrance and egress, and resonance and silence. Each of these components contributes to the quality and meaning imbued in the structure. Buildings are cultural icons of what we are and who we want to be. As cultural icons, they are a reflection of values, specifically the values of those that paid for the building, individuals who hope to sell merchandise.

But, more than promoting retail goods, the architecture of retail establishments colors the experiences of shoppers. Goldberger (2009) tells us, "Everything in the built

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world has a feel to it." The houses of retail are no different.  The grand entrance to the Macy's store in Union Square in San Francisco summons awe as shoppers stare upward at the vast height and immensity of the block-sized building. Entering the closest Best Buy store - with tall dark acoustical ceilings and an expanse of television screens, 10 foot high electronics display and rows of movie and game DVDs - inspires shoppers to sift through the many televisions and cameras, but not to linger in the ambiance or take in the smells. As these two examples demonstrate, the form of retail architecture contributes to the aesthetic quality of our communities and common experience. In stores where function trumps form, the surfaces and design channel no aesthetic stimulation, relying on hard surfaces and inexpensive right angles. The built environment in this case is stripped down and artistically indifferent. In situations where retail architecture spends resources on form, shopper's senses are stimulated and the experience is enriched beyond the elements of the exchange.

Winston Churchill ((1943)2003) famously said "We shape our buildings, and afterwards they shape us." He spoke about architecture generally, and is therefore relevant for any built spaces in a community. My conclusion from an earlier section is that Americans participate in the retailing system frequently and habitually with the intent to mold their own identities, demonstrate their love, celebrate their freedom, and attain beauty. This level of participation is met by a great proliferation of retailers in most American communities. As a result Americans interact with the architecture of retail, not just when they go shopping, but any time they step out of their front door or drive out of their subdivision. The environment built by retail is ubiquitous, contributing to the very character of the landscape.  Even if we wanted to, we cannot avoid interacting with the environment that retail has built. Thus, retail architecture shapes all of us.  The roles it plays in fashioning the purpose, demographic character and artistry of daily life anchors our expectations and values. And in turn Americans are richer or poorer for it.

Finally, how usable space is allocated, how much interaction exists between individuals of different social strata and how many cultural endeavors are shared may contribute to a cohesive community. Community cohesiveness derives from a sense of connection to one another. Moreover, the consequences of the manner in which retailers define the use of community space are non-trivial for building a sense of community. It is not just that shopping itself is a cultural activity where friends socialize and build connections (Zukin, 2004) or enjoy leisure time in a common area.  It is also that our shopping halls define who we rub shoulders with and whether we construct a familiarity with those who are not our immediate intimates or from the same social class.  By defining the usage of common areas, offering common art to enjoy and furnishing space for any community resident, the halls of retail influence the extent of shared experience among Americans and as a result whether we all feel that we are part of the same nation.

In sum, the nature and success or failure of retailers weighs on individuals and society at large. Retail stores are the face of a mass retail system and are the sites where individual consumers encounter this system. The public's attention is not centered on one area of retailing, but rather spans the entire retail sector, from cars to carpet, hardware to health stores.  However, in the last two decades, the increasing geographic spread of certain categories of retailers has correspondingly increased their salience for observers. Scrutiny focuses largely on chain stores, like Barnes and Noble, or stores with a large number of product offerings, like Target.  Popular opinion identifies these stores as

important both because of the number of stores across the US and because of the potential influence of each individual store in their local community (Goldman and Cleeland, 2003; The Economist 2003; Nijhuis, 2004).  The next chapter describes the history  and development of these two important types of retailers.

# Chapter 3: The historical development of US chain and department stores

The development of American chain and department stores follows the arc of changes instigated by the Industrial Revolution and the subsequent social transformations. Prior to industrialization, retailing in the United States shared many of the same characteristics of its cousins in European provincial towns. Although there were seeds of modern retailing earlier, the retail forms that we are concerned with, chains and department stores, emerged in the middle of the nineteenth century among the exciting and tumultuous push toward industrialization. New machines and factories spawned the production capability that dramatically reduced the cost of consumer goods and increased the variety of products available across the continent. Many social changes occurred coincidently to industrialization, such as the movement of population from rural to urban areas and new regulatory regimes. These broader changes in society combined with changes in the technology of production, distribution, and promotion to open opportunities for the creation and reproduction of chain and department retail forms. After more than a century, it was these retail forms that delivered the American consumer society to the vast majority of our denizens.

## 3.1 The retail system in colonial America

Prior to the industrial revolution, the retailing system had not changed for thousands of years. Retail stalls constructed in the bazaars of ancient Babylonia were much the same as the market day stalls set up weekly in Georgian England. Generally marketplaces contained merchants who purchased from hinterland (within one or two days' journey) and sold to the urban or town dwellers (Woolley, 1965). Buyers met sellers face to face in rough equality and for mutual benefit (Zukin, 2004). Only the most wealthy bought non-necessities. Most people participated just to acquire everyday needs that they could not make or grow themselves. This remained largely true in colonial America.

In the area that would become the United States, the five largest cities were Boston, Providence, Newport, New York, and Philadelphia.[2] They were both commercial and administrative hubs, receiving immigrants and those on official or trade business. The colonial urban centers grew rapidly, fueled by trade. Steeped in their role in the mercantilist economy, they drew not only people, but also raw products from the hinterlands of North America and other colonies (Chudacoff and Smith, 2000) and readied them for shipment to Europe. The colonies' cities were extensions of similar urban centers in Europe and as such were the transfer point for the Old World ways to the New World (Chudacoff and Smith, 2000).

Commitment to the mercantilist system was not the only reason most commercial activity centered on trade for the good of the Motherland. Technological limitations confined production to a limited number of handmade products and restricted distribution to very local areas. Essentially, the same individuals who created goods also sold them to their neighbors. As a case in point, blacksmiths sold horseshoes and anything iron that a

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[2] The Southern colonies had fewer large, natural harbors funneling most of the trade northward. Ports were less important in this area because the number of navigable rivers reduced the reliance on ports as transfer points for goods. Also most of the population in the Southern colonies was slaves and indentured servants, reducing the size of Southern markets for commercial goods. The main exception to this is Charleston.

family might need such as Dutch ovens and other cookware. Likewise, merchandising and promotion were as limited as distribution. Little advertising (paper was still expensive) and crude displays (with goods usually lining bare shelves) were the norm in both Europe and the colonies (Cox, 2000). Individuals living far from an urban center relied on the infrequent but regular visits from traders (coming from the port cities to purchase furs or tobacco) to acquire imported necessities like cloth or utensils. Rural dwellers waited for the few manufactured goods to slowly reach them and were beholden to the exigencies of the trade route. Given these constraints throughout the colonies, only the most wealthy merchants or governors consumed luxury goods prior to the revolution from Britain (Chudacoff and Smith, 2000).

However, the waning days of the mercantilist system foreshadowed attributes of the contemporary retail system. Both in Europe and in the New World, there was a population explosion in the middle decades of 18th century. In the American colonies, the number of people doubled about every 25 years (Appleby, 1999). This growth in the populace coincided with technological developments in transportation and communications that increases both quantity and quality of goods available to people in comparison to what individuals in prior centuries knew. In fact, the number of goods that were available grew as rapidly, if not more rapidly, than the human population. Whether for sugar from the West Indies or Dutch bulbs or British calicos, a demand and supply cycle occurred repeatedly. First quality improved, then output and prices tumbled. Rather than a glutted market though, segments of the populous, who previously did not buy luxuries, began purchasing the newly inexpensive goods. As a result, producers still managed to sell their cheap products at a profit. Consumption, specifically the act of regular buying of non-necessities like sugar, tobacco and coffee entered the lives of people up and down the social hierarchy. Whereas previously, only the most affluent participated in this sort of spending, now those of modest means engaged, too. Just as importantly, the logic of the marketplace disseminated throughout the culture and society (Appleby, 1999). The average citizen of England, Western Europe, and the American colonies now expected small luxuries for themselves, not just for the few at the top of the social order. These changes planted the seeds of wide-spread consumption. As Gitlin (2003) quipped, "The pleasures of acquisition in seventeenth century Delft led to the pleasures of consumption in 21st century New York."

If consumption was a germinal stage prior to the American Revolution, production, distribution and promotion were no different. Neither in the colonies nor in Europe were there chains stores[3] or department stores to distribute and merchandise products. Generally, open-air markets, directly linking producer and consumer, continued to be significant, and haggling over prices was common (Winstanley, 1983). Individual artisans hand-crafted most goods, like metalwares and barrels, and householders made anything else they needed at home. Entrepreneurs setting up shop required personal connections or a relative's formal letter of introduction to establish the level of trust necessary with importers to place orders and receive goods from outside the immediate area (Winstanley, 1983). Additionally, although transportation was improving, shipping items from Europe or over relatively small distances in the Colonies was difficult and expensive, and required

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[3] There is evidence that a small number of London merchants set up single, satellite shops in other English towns where there usual customer base vacationed. Travelers to Bristol, for example, documented seeing extensions of well-known London shops in that tourist town, but this was exceptional and the maximum extent of an effort at multiple store locations for the same retail firm at the time (Cox, 2000).

significant amounts of capital to accomplish (Winstanley, 1983).  Each of these factors maintained the inertial pressure on the old production and distribution systems.

In the mid-eighteenth century, though, slight shifts in commercial customs led the way toward more contemporary methods of distribution and production. Again population growth played a key role.  As cities grew in size, specialization emerged among the producers and distributors of goods.  By fits and starts, a separation between craftsmen and retailers emerged. Urban retailers began purchasing goods from producers, and then displaying their wares and selling them directly to customers. In England and her American colonies, retailers focused only on merchandising and distribution, gradually shifted to price competition (as opposed to regular dickering over prices) and using cash as opposed to barter. They also initiated using window displays in fixed shops (thanks to evolving glass manufacturing technology in Europe), as opposed to temporary market stalls (Winstanley, 1983). Still these changes advanced slowly over a period of several generations, beginning in the urban areas and disseminated outward. All in all, in the 1700s, fixed shop retailers were only common in urban areas and individual retailers found the knowledge and capital for fixed-store retailing hard to come by.

Most importantly, there co-existed for some time elements of the old and the new with no distinct break. In general, little had changed for hundreds of years; only the very wealthy enjoyed purchasing luxury goods. Challenges in transportation and communication technology hindered the distributing goods from other continents or other regions. Local goods, of course were available, but remained largely handcrafts, few in quantity and with little variety. Even the handful of individuals in the largest cities in the American colonies who sold goods exclusively through retail stores offered a variety and quantity much like provincial towns in Europe, rather than what was found in London or Paris. In sum, on the eve of Revolution, there was only the foreshadowing of the contemporary retail system to come.

## 3.2 The technological and social changes between 1840 and 1940: the development of the modern retail system

After the American Revolution, the retail system remained on the same trajectory as during the Colonial era. Great leaps in the development occurred in the time period between 1840 and 1940, following the transformations in technology and society wrought by the Industrial Revolution in the United States. Retailers exploited the new technologies and social conditions to expand buyers' access to goods, through new retail formats: department stores and chain stores. Like their pre-revolutionary counterparts, Americans were not consumers or shoppers prior to the Civil War.  In the next 100 years though, production, distribution, promotion, and consumption reached a massive scale touching the lives of many more Americans.  While still circumscribed to certain social strata, the success of modern production, distribution, and promotion methods assured that the ideal of mass consumption was fully articulated and many Americans now aspired toward it.

Although there were many technological miracles that occurred at the outset of industrialization in the US, I focus on two: the advent of the sewing machine and steam locomotion. These two developments are helpful exemplars to illustrate how the technological changes from the Industrial Revolution remade the production and distribution of goods and they occurred concurrent to the advent of new retail store forms, chain stores and department store. In both cases, these new technologies spurred the

transition from limited manufacturing and distribution to mass manufacturing and distribution in the US.

Sewing clothes by hand requires nimble fingers, attention to detail, and plenty of time.  The adoption of the sewing machine made it possible to manufacture clothes and shoes exponentially faster and more consistently, just as Gutenberg's printing press eliminated the time-consuming production of hand copied books.  Manufacturers used the more efficient process to produce larger quantities and a greater variety of clothes. Moreover, as each piece of clothing required less time to assemble, each piece was also less expensive to produce than before, even accounting for the cost of investing in sewing machines for each worker.  Cumulatively, the change to a massive scale of production did not just accelerate the acceptance of readymade clothes; it also increased the quantity and variety of clothes available to consumers and decreased the price.  This pattern was not isolated to clothing; in general, industrial mass production fed the opportunity for mass consumption in the US.

The situation for the distribution system was little different. New inventions eased access to transportation networks and reduced the cost of ferrying goods and people. The railroads are a case in point.  Upon its completion in 1869, dignitaries and average citizens celebrated the Transcontinental Railroad as a mighty technological achievement. Overnight, instead of traveling by waterway or wagon, which were both costly and time consuming, people and goods sped along the nationally-connected railroads.  For retailers, the railroad offered an historically inexpensive mean of distributing volumes of newly manufactured goods to previously remote communities.  Like the sewing machine technology, railroads increased access to many more consumer goods at low cost.  The new mass production technology and mass distribution system worked in concert to elevate the possibilities for mass consumption.

There were also technological improvements that influenced the promotion stage of the retail system, but these are less associated with the Industrial Revolution.  The success of mass production and distribution might have left American retailers with glutted stores shelves, if not for the increased availability of commercial entertainment and media (Gitlin, 2002) that stimulated the desire for consumer products. Advertising in magazines and newspapers, on radio (beginning in the early 1900s), and motion pictures (beginning in the 1930s) mixed promotion with entertainment, serving up a potent way to stimulate the desire for consumer goods.  Advertising techniques ranged the gamut from product awareness to product placement in otherwise pure entertainment channels (as the discussion of diamond engagement rings illustrated in  Chapter 1).  The technological changes that reduced the costs in production and distribution also reduced the costs of many advertising and entertainment avenues, accelerating their use by retailers (Gitlin, 2002).

Thanks to national advertising campaigns (beginning systematically in 1931 with a promotion by Proctor and Gamble for Camay soap (Aaker and Joachimsthaler, 2000)), consumers across the US soon recognized brands like as Pillsbury, Sun-Maid, and Quaker Oats as signals of quality (Zukin, 2004) regardless of who sold them.   Promoting brand-named goods nationally ensured the standardization of household products and eliminated the trust that was previously necessary between owners and customers.  Customers replaced their trust in the safety of Ed the butcher's chicken or crustiness of Edith the

baker's bread with faith in the consistent flavor of Farmer John sausage and reliable freshness in Wonder Bread (Kim, 2001). Loyalty transferred from the individual shopkeepers who consumers knew on a first-name basis to product (brand) loyalty.

Although technology is frequently the star of any story about the late nineteenth century, three significant social changes acting in concert also changed the face of the retail system and eventually fostered the growth of new retail organizational forms. Advances in medicine, hygiene, nutrition, and dramatic immigration all contributed to a spurt in population growth especially in urban areas. Immigrants and migrants arrived from across the globe and rural America and found employment at the many new factories in cities. Over 12 million people arrived from 1870 to 1900, double the number of arrivals from the previous 30 years (Carter and Sutch, 2006). More people employed in the cash economy meant more disposable income per capita than when compared to the previous rural, agriculture based work arrangements. Relative to rural workers, urban factory workers were more productive and kept shorter working hours (Chudacoff and Smith 2000). Successful advertising aimed at the urban middle-class consumer (with had disposable income and leisure time) drove purchasing to new levels. In essence, the pristine labor force willingly fulfilled their desires by consuming of all the goods that the recently-established industrial system produced (Baudrillard, 1999).

**3.3 Societal changes: regulatory changes, zoning laws**

In addition to the demographic changes that occurred between 1840 and 1940, there were also significant regulatory changes that cemented the earlier movement from market stalls to permanent stores and eventually new retail forms. Although jurisdictions created ad hoc zoning regulations in the early part of the 20th century, the Supreme Court ruled in 1926 that zoning laws were constitutional in the Village of Euclid Ohio v. Amber case. This opened a floodgate of regulation that resulted in a systematized and structured spatial development of housing and industry. The segregation of retail space from residential space created distinct roles for structures as single-use commercial or residential, no longer both. But also important were rules that governed the proximity of retail shops to residential areas and the location of retail zones in urban areas. In this case, zoning regulations delineated the distance that consumers traveled to arrive at retail establishments that were situated out of the local neighborhood. Although older cities like New York or Chicago were less influenced by these regulatory changes, communities established or expanded from the 1920s onward followed these laws such that this separation between retail and residential spaces became the standard, the ideal even. This transformation in zoning and urban planning reinforced the value Americans increasingly placed on reducing the density of people and buildings in urbanized areas, especially for the wealthy or those aspiring to upper-class status (Jackson, 1985).

In addition to changes in urban planning and regulation, food safety rules also influenced the use of space and physical arrangements of retailers. Even before the advent of the Federal Drug Administration, there was an increased awareness of food safety and sanitation. Upton Sinclair's muckraking account in The Jungle (1906) is but one example of burgeoning concerns and public outrage during this time period. As a result, local jurisdictions established regulations around basic food handling and hygiene. As an example, most US food shopping moved indoors in the 1930s away from outdoor stalls

exposed to the hazards like the elements and insects (Zukin 2004).    This often improved the quality of food; it also reduced the noise and crowds of people in the street. On the other hand, with food vendors inside, there were no longer energetic barkers calling, colorful foods on display, or spontaneous interactions between sellers and customers on the street.  Along with the zoning laws, these kinds of regulatory changes contributed to the shift to more ordered, consistent and systematized retail arrangements.

Prior to 1840, retailing was a limited and local system where shopkeepers distributed expensive handcrafts and locally produced goods, frequently from temporary market-day stalls.  The advent of industrialized modes of production, distribution and promotion (like ready-made clothes, railroads, and national brands) revolutionized the retail system, increasing the quantity and variety of goods available.  As result, Americans, especially those in the burgeoning urban middle class, enjoyed much higher levels of consumption. At the same time, the experience of retail changed to a more orderly, consistent exchange that hinged less on social interaction.  In embracing their new role as consumers, middle-class urbanites shifted their values to emphasize consuming and playing, replacing the frugality and hard work that had been required on the farm.

It is in this environment that two new retail store forms emerge: department stores and chains stores. The following section describes the basic character of each type of retail store form and connects them briefly to their economic and sociological roles.

## 3.4 Emergence of department stores 1840-1940

The first department store in the United States, A.T. Stewart's The Marble Palace, opened in New York in 1848 (Kim, 2001).  What began as a simple dry goods store, selling fabrics and readymade clothing, the department store form spread across U.S. and Western Europe.  This new retail form offered a wide selection of inexpensive, manufactured products to draw consumers with newly acquired wealth. As an example of how diverse the product lines were, the Macy's store in New York City in 1894 (in NYC) offered not only women's, infants' men's and boys' clothing lines, but also lawn mowers, chest weights, fishing equipment and housewares (Swiencicki, 1999). Department stores differed from other general merchandise stores in the size of store location that permitted each "department" to offer a depth in product line comparable to a small specialty store. In comparison, general stores or late five and dimes, offered a variety of products but little choice within each product line offered.

By the end of the 1800s, department store retailing was the lure that drew people along rail and trolley lines to the downtown in major urban areas or into town in rural areas (Frieden and Sagalyn, 1991). To reinforce the notion of merchandiser as fashion authority, many urban department stores constructed lavish buildings, conveying grand style. Department stores encouraged flocking to their location with huge plate glass windows on the street displaying the season's best and ever larger and flamboyant displays. In addition, stores set up botanical gardens, restaurants, and museums (Leach, 1993). Just looking at the display windows even when stores were closed became a pastime and a magnet (Frieden and Sagalyn, 1991).  By 1920, 90 percent of general merchandise sales occurred in establishments located in central business districts (Hoyt 1968 as cited in Handy 1993).

Department stores, and later five and dime stores, such as Woolworth's, were large general merchandisers that equalized several aspects of American society.  Firstly, they

imparted an education to the new middle class.  With products marked by price tags and no haggling expected, customers learned the value of many new products.  All shoppers could comparison shop among retailers and thereby evaluate each item's worth for themselves. This was important for the multitude of inexperienced consumers who previously would have had to naïvely negotiate with a milliner or cabinetmaker.  The result was a very democratizing force in American society, providing equal access to market information (Frieden and Sagalyn, 1991).  Indeed it was in the halls of New York's large department stores or the aisles of the local five and dime that women of many classes and backgrounds mingled, shopping side by side, though buying different things (Zukin, 2004).  The same is true today as, upper-class and working-class people both shop at Target, whether for paper towels and gardening supplies or soda and clothes.

## 3.5 The emergence and proliferation of early chain stores

The first manifestation of the retail chain organizational form was tightly linked to the expansion of the railroads and the promise of low prices. Not only did railroads provide transportation for goods to a rurally based populace, but Richard Sears received the inspiration for a mail-order business as a railway station agent.  He and a partner, Alvah Roebuck, assured farmers an inexpensive way to acquire goods regardless of their location. After nearly 40 years of inexpensively selling necessities to rural America via mail order and delivered by railroad to the post office, Sears, Roebuck and Co. opened its first retail location in Chicago in 1925.  The experiment in the big city worked, leading Sears to open another branch and retail chains were born (Sears Archives, 2010). Less than 15 years later, Sears and Roebuck had spread to cities and towns across the continent, even in the Territory of Hawaii (Pan, 2003).

Sears did not remain the only chain retailer for long. Other retailers and grocers (e.g. A & P and Woolworth's) followed suit that by 1934, the Federal Trade Commission found that there were 1,660 chain store retailers in the United States accounting for 65,624 stores (Kim, 2001).  In this era, chain retailing was focused on "Main Street" in small to medium sized U.S. towns, with most communities supporting some single-unit stores, a five and dime, drug stores and coffee shops. Urban centers enjoyed lively trade anchored by large department stores (Frieden and Sagalyn 1991).

The availability, knowledge, and acceptance of national brands cemented the place that chain stores held in the American marketplace by neutralizing the discomfort consumers may have had with the unknown chain store owner like distant Mr. Sears. Thus, before the beginning of the Second World War, chain organizations were commonplace in the United States. This particular category of organizations offered the same list of recognized brands at establishments across the country and were legitimately accepted as actors in the retail marketplace (Ingram and Rao, 2004).

Chain stores' success lay chiefly in efficient and low-cost distribution of standardized consumer products. Godfrey Lebhar, an early editor of the periodical Chain Store Age and avid supporter of chain stores, captured the contributions of chain stores in the early and middle parts of the 20th century:

> "If the economic history of the past 50 years has established anything, it is
> that the chain-store system of distribution provides an effective basis for
> low-cost distribution. That is one of the things most needed if our vast

facilities for mass production are to be effectively employed for the common good." (Lebhar, 1955, p. 370)

Chain stores mastered distribution as no one had previously, funneling a myriad of products into the arms of householders across the US.

But it is debatable as to how widespread this "good" was. It seems that most of the access to standardization was for the middle class, and not workers and the lower class (Cohen, 1999.) As Cohen (1999) points out, in Chicago between 1927 and 1929, chain stores locations were distributed in well-off neighborhoods like Evanston and Oak Park, whereas only 1% of stores in Gary and Joliet (working-class areas) were owned by chain stores. The cash-and-carry policies that chain stores required were too inflexible for working people's constrained budgets, in spite of their lower prices. Workers still depended on credit commonly offered by local storekeepers, but not by chain stores. (Cohen, 1999) Thus, even with the great expansion of chains, the retail system blocked access to the consumer lifestyle for those of the lower class and in rural areas.

**3.6 The technological and social changes between 1940 and 1990: The establishment of the Contemporary Retail System**

While all of the parts of our contemporary retail system were in place prior to World War II, the numerous technological and social changes that occurred during the 60 years after the war markedly transformed the depth and spread of retailing. By the end of the 20th century, Americans of all social classes had access to a wide an array of low-cost goods, shared a common knowledge of national products, services and store brands, and spent a large fraction of their disposable income on the products available to them.

Two important technological changes that occurred during this era were the adoption of microcomputers and improvements in communications technology. In the 1950s, information-processing technology was confined to rarified military, aerospace and research institutions. Moreover, the machines that performed intense computational tasks were large - taking up room-sized space rather than desk-space - and focused on largely government applications (Szostak, 1995). Also, it was widely believed that there was only a limited market for computers in the commercial realm. It was not until the 1960s that business managers began to adopt computers to assist with various computational functions.

The huge jump in the value of computers for retailers in particular occurred in 1974 with the introduction of Universal Product Codes. Universal Product Codes encode decimal digits into a sequence of bars and spaces. The decimal digits represent detailed information about the product; laser scanners capture this information by reading the zebra-like stripes of the bar code. Although first implemented by a supermarket in Troy, Ohio in 1974, other retailers soon embraced the new technology (Lichtenstein, 2009). In 1980, Wal-Mart began testing the use of UPC codes as a means of increasing the number of goods sold by the same number of cashiers. The proof was in the pudding as managers recorded a 50% increase in productivity, enough to convince Wal-Mart to implement the new technology across all of their stores (Lichtenstein, 2009).

Concurrent with the acceptance of UPC technology were significant changes in communication technology. Lichtenstein (2009) documents that chain retail

establishments changed from reporting sales and inventory data on a weekly basis to updates throughout the business day. Improvements in monitoring and control compensated for the cost of these investments. Managers instantly adjusted products and prices based on local preferences and competition (Sieling, Friedman and Dumas, 2001) and spent less time ordering goods. IT investment paid off, not just because of the new efficiencies but also due to the manner in which the new information was used (Bailey, 2004). The results were higher sales, increased productivity and lower inventory and distribution costs (Wrigley, 1988). For instance, one study of retailers in Indiana demonstrated that sales per retail employee in 1972 were $75,200 on average (in 1987 dollars) whereas in 1992, once the majority of these technological advances were implemented, the average sales per employee were $83,700 (in 1987 dollars) (McGurr and DeVaney, 1996). This was an 11% gain.

The consequences of the addition of the Universal Product Codes and new communication technology were far-reaching. Rather than just changing the number of customers that could be served in any period of time or producing more accurate reports to manage stock, the use of UPC, along with microcomputers, and communications technology touched every part of retail production, distribution and promotion.

Armed with this new technology, retailers shifted the balance of power between themselves and manufacturers. Previously manufacturers possessed the most up-to-date knowledge of consumer buying trends, shifts in demand or how competitive products were fairing. Retailers might have had a loose idea of product ebbs and flows at a monthly or quarterly inventory, but in comparison to the data that manufacturers maintained, the old inventory data was paltry. However, with computer-linked bar codes, retailers gained more information than manufacturers. Retail managers easily set promotions, customized prices by location and collected customer information, and at the end of the day, captured detailed sales data and managed their losses (Sieling, Friedman and Dumas 2001). Moreover, now retailers, not manufacturers, had the best estimates of future performance. This information armed retailers in their negotiations with suppliers, giving them a new edge in negotiations. Additionally, manufacturers had excess productive capacity (Sieling, Friedman and Dumas 2001), further weakening their position. Ultimately retailers enjoyed more say about product, price and placement on the shelves. Taken together, the consequences were even cheaper consumer products and newly empowered retailers calling the shots.

Since the 1950s stores has remained the same size. For example, the average supermarkets stored 9,000 items and were about 20,000 square feet (Lichtenstein 2009). The implementation of computers to manage inventory and ordering eased the burden of stock control. Whether in a vertically integrated firm or undiversified one, micro computers facilitated controlling inventory and ordering between manufacturer and the retailer, and among the different units in a chain retail firm (Lichtenstein 2009). Freed from this yoke, managers increased the number of products sold without getting bogged down in managing them. Thirty years after the advent of bar codes, the average supermarket had grown to 60,000 sq feet. And carried about 30,000 items. (US Department of Agriculture, 2009)

Improvements in communications technology accelerated the stream and prevalence of media and the concurrent promotion of consumer products. The techniques of product placement and advertising remained largely the same, but used media born

after World War II. Whereas in the early 20th century, messages targeted the urban customer, by the end of that century media exposure was unrelenting for everyone (Gitlin, 2003). Television, in particular offered a conduit for a wide variety of advertising targeted at program viewers. Seventy-five percent of American households owned at least one television by 1955 (Gitlin, 2003). Within a generation, Americans adopted TV as a member of the family, integral to daily life. From 1983 onwards, Americans have watched an average of 7 hours of television per day, which constitutes more than 40% of the average American's free time (Giltin, 2003). Moreover regional differences melted away thanks to the electrification of rural areas and the rise of cable television providers. Offered nationally, HBO launched in 1975, WTBS Superstation in 1976, ESPN and Nickelodeon in 1979, and CNN in 1980 (Stephens, 2000). Embracing television as a constant companion ensured a ready audience for advertisers. There is so much advertising that promoters hope to cut through the clutter, jockeying for American "eyeballs" or "impressions" (Gitlin, 2003). The flow of media and its role in the promotion function have ensured that, regardless of class or region, all US buyers have the necessary information to be consumers.

In the era since the last world war, technology has propelled the contemporary retail system. "The true significance of technology in raising the American standard of living is apparent only when production and distribution are viewed as a unified process," said J. Frederic Dewhurst in his tome, America's Needs and Resources, published first in 1947 (Lebhar, 1963; Yarrow, 2008). Even in the middle of the last century, Dewhurst, an advocate for advancing US economic power and economic education, perceived the influence technology was having on the delivery of consumer goods to the buying public. By the end of the 20th century, technology unified the production, distribution, and promotion functions to increase consumption and solidify it as an American way of life.

## 3.7 Social changes between 1940 and 1990

After World War II, downtown business districts lost their gravitational pull. Rather than being drawn to cities and towns' central business districts, people flocked to the suburbs on the perimeter of the urban core. Returning G.I.s benefited from low-interest loans, which were critical for a wave of home-buying families. Inexpensive homes with plenty of yard space sprouted up away from the city core, in new subdivisions, like Levittown (Cohen, 2003). Detroit produced cars at reasonable prices, eliminating the need to be close to transit lines. And President Eisenhower signed the Interstate Highway Act 1956 shifting the transportation of people and goods away from rail networks. With this shift, manufacturing also moved out, locating near the burgeoning suburban housing tracts (Lebhar, 1963). This combination of forces led to a decline in the number of city workers and city shoppers, which depressed downtown retail sales. Retailers responded quickly, opening branches in the suburbs, closer to their customers, in new regional shopping centers with plenty of parking (Lebhar, 1963; Frieden and Sagalyn, 1991; Handy, 1993,).

In the newly forming peripheral urban areas, shopping malls emerged as the primary retail marketplace. These indoor commercial centers included many different stores, large and small, and lots of free parking. With the wide selection of stores, malls housed in one place most of the goods a family consumed. Usually situated close to highways, mall development attracted residents, lured business, brought jobs, and encouraged additional, proximal residential development (Chudacoff and Smith 2000). In combination, the government policies encouraging suburban home ownership and the

retail development in the suburbs ensured the decline of historic downtown areas across the US and opened the opportunity for different retail arrangements, new store formats, and configurations.

Finally, changes in the labor force after World War II changed the amount of discretionary time families might spend on shopping. Earlier retail organizational forms were designed to cater to the single breadwinner, where the nuclear family shopped together once or twice a week. This model that was no longer in synch with the American family by the 1970s and 1980s. By the 1980s, more than fifty percent of women participated in the workforce. Couples in which only the husband worked represented eight percent of married couples in 2007, compared with 36 percent in 1967 (Pan 2003). The retail formats that developed during this time period accommodated these new time constraints while utilizing the new spatial arrangements made possible in the suburban context. The following section discusses specifically the new character of each retail organizational forms.

As discussed in the previous section, the mechanization born from the Industrial Revolution created economies of scale and scope across most commercial sectors. In the arena of distribution, the retailing system adopted two different scale and scope solutions: chain stores and department stores. Although both organizational forms used both kinds of cost savings, each emphasized one or the other. Chain stores shared the cost associated with headquarter's staff across many different locations, benefiting from economies of geographic scope. Department stores pushed through an increasing number of products via the same store, exploiting economies of scale. In the later half of the twentieth century, enabled by the technological and social changes afoot, chain and department store retailers stole from the each other's play book: with department stores opening many different locations and chain stores maximizing the number of products sold under one roof.

Two key developments changed the face of department stores. One was the move out of the urban core and the second was the advent of discount department stores. Department stores followed the demographic shift to the suburbs, during the 1950s and 60s. Initially this was an effort to simply off set the sales lost from their downtown outlets by capturing sales in a new store in the suburbs (Lebhar,1963), not an explicit effort to improve sales via geographic expansion. Coinciding with the growth of suburban subdivisions, developers built local and regional shopping centers with generous parking to cater to the new automobile class. In a short period of time, favorite downtown department stores transformed into regional retailers with suburban locations sharing the name from the original downtown establishments. As suburban expansion progressed, so did the number of establishments associated with each department store chain. Between 1950 and 1960 the number of chain department stores doubled and then in the next decade tripled (Historical Statistics of the United States, 2009).

The expansion plans implemented by the nation's leading department stores initially left the rural areas of the county largely untouched and unconnected from the retail system. Additionally these department stores remained steeped in their historical role as an authority on quality and fashion. This all changed in 1962. In that year, Target, K-mart and Wal-Mart, discount department stores, were all founded, each with a focus on low-cost merchandise and, especially in the case of Wal-Mart, attention on the underserved rural areas (Walton and Huey, 1993). Inevitably these regional players bumped into one another in their geographic expansion. Over the course of the 1980s and 1990s, the

industry consolidated leaving a concentrated set of department store firms in the U.S. with thousands of establishments across the country. By 1992, the four largest firms in the conventional department store category controlled 55.9% of annual sales and in the discount department category the four largest firms controlled 78.7% of annual sales (US Census Bureau, Economic Census, 1992).

Coincident to department stores becoming chain stores and the birth of discount department stores, department stores as a category shed their status as taste-makers. The cache that the downtown stores developed and fed did not follow them to the suburbs. Unlike in earlier periods, retailers had no need to educate consumers in the use and significance of consumer products. Marketers, magazine publishers, and television and film producers successfully saturated the country (Gitlin, 2002). These fashion authorities defined the articles of beauty, status, and luxury and, as a consequence, retailers limited their promotion efforts to advertising the national brands they carried. No longer did they have to explain the status, form or function associated with products. The few department stores that did maintain their role as an authority, like Bloomingdale's, checked the scope of their expansion. A limited number of locations engenders a sense of exclusivity, and by extension status, for shoppers who frequent these retailers.

On the other hand, discount department stores, such as Target, Wal-Mart and K-Mart, offer access to the "good life" where consumers obtain all of the kitchen gadgets, clothes, and consumer electronics they desire without prohibitive prices. Discount department stores sell a good deal, not status. In this case, the national brands that are proffered are a guarantee of the quality of the merchandise, which otherwise might be suspect at such a low price. Shoppers purchase Levi's jeans or Martha Stewart sheets with confidence from these retailers.

Thus along with the structural changes in multi-category retail, the sociological significance of these retailers changed. Contemporary department stores lost the glitter and the glamour of an earlier age, but their role in the retail system remained important. These retailers currently offer widespread access to retail and an improvement in the quality-cost tradeoff for consumers and they thereby elevate the population's ability to partake in the American dream.

While department stores moved en mass to the ranks of chain stores after World War II, all chain stores intensified their geographic dispersion and adopted characteristics that were previously hallmarks of department stores. The key structural feature of chain organizational forms, a centralized bureaucracy that accomplishes critical routine tasks such as procurement and inventory control (Chandler 1977) did not change during this time period. What did change was the extent of the geographic spread of chain retailers. More importantly, the technological advances made after World War II bear specific credit for this expansion.

Function-specific professionals, using computer-based data management and new forms of telecommunication, frequently innovated distribution and warehousing processes to produce more efficient and ubiquitous chain establishments than at any other time in their history (Holmes, 2001). In fact, nearly all productivity growth in the retail and service sectors during this time period can be accounted for by the net entry of more productive establishments and the exit of less productive ones (Foster, Haltiwanger and Krizan, 2001). Using new communication technology, central-purchasing functionaries delivered more efficient stock turn-over, nuanced seasonal adjustments and facile management of an

expanding number of stock keeping units (Dunne and Lusch, 2005). As a case in point, Wal-Mart's Data Center, the heart of its logistics division, tracks more than 680 million stock-keeping units weekly (Wal-Mart Annual Report, 2005). Moreover, when new stores are added, this inventory capability increases. Technological enhancements easily swallow the addition of new stores to the system. Since, the economies to scope accrue best by spreading the cost of innovation across a growing number of the firm's branches. These costly investments in technology (and other systems) motivate chain retailers to add to their network of stores. As chain retailers expand geographically, each new establishment shares the advantage and the cost of the centralized coordination while driving firms' revenue upward. The greater efficiencies captured with technology and the size of infrastructure investments both increased the pace of adding new chain establishments.

Another factor driving the expansion of chains stores was the dependence of developers on chain stores for success. Developers of shopping centers needed stores that could attract customers from five or more miles away. It was largely chain stores, who possessed the necessary level of name recognition, that could draw customers from this distance, even though some local merchants might have been household names in the region as well. Size was important from the beginning, requiring capital investments and operating budgets that only already successful merchants had at their disposal (Lebhar, 1963). Developers relied upon insurance companies and other financial institutions to assist with the development costs and inherent risks (Mitchell, 2006). Financial institutions were more likely to assist shopping center developers that had leasing commitments from AAA-1 companies (Lebhar, 1963). Although local elites challenged the legitimacy of non-locally owned stores in the 1920s and 1930s, the public fully embraced chain organizational forms as part of the landscape after these episodes (Ingram and Rao, 2004). Woolworth, AP Markets, and JC Penny's stores were incorporated into the idealized picture of an American community (Leach, 1994). The basic attributes of chain stores, consistency and centralized monitoring, and their accepted legitimacy continued apace with the notable growth into communities across the US through 1990.[4]

As I explained in an earlier section, during this time period department stores adopted the geographic growth strategies used by chain retailers. At the same time, chain firms adopted attributes that had been largely a tactic of department stores, namely increasing each establishment's size. Retail managers using state-of-the-art technology were also able to support larger individual chain establishments. Larger stores with footprints of 100,000 to 250,000 square feet may still carry a single product line, like hardware or books, but the extensive selling space furnishes a depth within that product line unavailable in a smaller space. Home Depot or Barnes and Noble bookstores carry as many products as department stores do, but mainly within a single product category (Dunne and Lusch 2005). Thanks to new technology, particularly in inventory management, it is possible to increase the store size and not be crippled by the complexity of supporting such a large number of products.

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[4] Some readers may question this statement about the recognized legitimacy of chains store, especially given the amount of press that protests again Wal-Mart expansion have spawned. To put a fine point on it, the statement accurately summarizes the situation between the end of the Second World War and 1990. Only in the 1990s, as Wal-Mart extended its reach into suburban and urban areas, did activists criticize and lobby against this large discount retailer. The first efforts against Wal-Mart occurred in Louisiana in 1994, when a group of homeowners protested the construction of a new Wal-Mart location abutting their subdivision.

With the increase in individual store size and a reliance on new shopping centers, retailers had by the late 1980s embraced the Big Box format (Pan, 2003; Clayton, Kerry, and Weinberg, 2004; Mitchell, 2006). Big Box stores offer prodigious selection under one roof, convenient hours for the commonly dual income family (sometimes open for 24-hours a day) and a wide swath of parking so that car-captured consumers easily zoom in, find what they needed and zip out[5]. However, the style of the structures is simplistic in the extreme: plain, 40-foot-high exterior walls, no windows or adornment, fluorescent in-door lighting and finishes in laminate or vinyl. Unlike department stores of old, which first pioneered large format stores, function trumps form, ensuring efficiency and enduring low cost.

To close this discussion of the change in retail from World War II onward, I turn our attention to the contemporary situation for the retailing system in the United States. Broadly speaking, the history of retail I summarized above, has hinged on two transformations: (1) the extent to which retailers sell many categories of products within a single establishment and (2) the extent to which retailer firms operate only a single, individual store or many stores in various locations. Department stores are the most common type of store that sells many categories of products lines; they also have been the most influential type of multi-category store in the United States. Other store types that sell multiple categories of merchandise are variety stores, warehouse stores and general stores. I define multi-category retailer to include department stores, discount department stores, warehouse stores, variety stores, and general stores and this category figures prominently in the theoretical chapters to follow.

Chain stores, too, are a significant category of interest in my theoretical chapters. To reiterate, chain stores are retail establishments in many different locations governed by the same firm. At the other end of the spectrum are independent stores where the owners operate the store and coordinate purchasing and promotion and support activities like human resources and information technology. Chain-store retail firms duplicate their methods of promotion and distribution across many different contexts. These retailers use three different kinds of governance structures to accomplish these tasks: company-owned and operated stores, franchise locations[6] or a combination of the two. Whether the company or a franchisee operates a store is generally transparent to the customer because the product lines and promotion methods are identical across company and franchise locations. Given the similarities in coordination of key functions between company-operated and franchise-operated establishments for the following analyses, I classify all stores where store managers report to a headquarters (where critical functions are centrally coordinated) as a chain store.

At the extremes, these two dimensions of retail distribution create four distinct categories of stores: Chain-multi-category stores; chain single-category stores; independent-multi-category stores; and independent-single-category stores. Chain-multi-category stores are very salient for readers and easy to recall. Target, Macy's and Costco all fall into this category. According to the 2002 Economic Census, 20 firms own 65% of all US

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[5] The definition of "big box" varies with the speaker invoking it. As explained in a survey of ordinances and urban planning action taken in response to the growth of this type of retail format, some definitions emphasize prodigious square footage, others the large number of stock keeping units and still others, the architectural features and auto-centered convenience (Clayton, Duffy and Weinberg, 2004).

6 Under a franchising arrangement, one firm grants the right to distribute its products or use its trade name and procedures to other firms. Contracts define the boundary of the relationship and the nexus of control. The franchise holders are legally independent but must follow the parent company's detailed standards (Dicke, 1992).

multi-category establishments.  Therefore, across the nation, the majority of multi-category stores are chain stores. In light of the historical trajectory of multi-category stores, this is not a surprise. What may be more surprising is that there is still a large minority of multi-category stores that are not affiliated with a chain.

The chain-single-category group of stores encompasses a large variety of specialty retail establishments. Examples of this type of store range from Victoria's Secret stores to innovative formats with very narrow product lines like Bell Atlantic's cellphone retail outlets (Michman and Mazze, 2001). There are still more independent specialty stores than chain specialty stores. As an example the 2002 Economic Census reported that over 676,000 stores were single-establishments specialty stores and about 397,000 were chain specialty stores. Whereas they do not attract a lot of attention, independent specialty retailers cover the wide variety of products that creative entrepreneurs can imagine. Green home building supplies, local wines, children's apparel from Paris or imported Chinese tea are all examples of an independent specialty retail store's very narrow product line, which may not be successful in a multi-category or multi-unit format.

To summarize, contemporary retailing is marked by three main characteristics: impersonal relationships, non-local ownership and accessibility to a wealth of products. Buying merchandise frequently involves shallow and impersonal interactions between merchant and customer, particularly in stores where the owner is not the operator.  Prices are marked openly and bargaining with the local merchant was eliminated over one hundred years ago. Branded products garner consumer trust; trust in the retailer is not necessary for successful purchase.  Much of the retail marketplace is no longer on a human-sized scale with retailers commonly offering tens of thousands of products in stores the size of aircraft hangers.   Purchasing products for household and individual needs commonly occurs in a chain store that stocks merchandise that does not vary from community to community. Rolled together these characteristics make American retail accessible to all.[7] What's more, consumers take for granted these characteristics of retail, defining them as being inherent to achieving the American dream (Walton and Huey, 1993). In short, the U.S. public now views being a consumer in this retail milieu as an intrinsic part of the American way of life, equal to the privileges and duties bestowed to a citizen (Cohen, 2003). The important contemporary retail organizational forms are the sites in which Americans enact their core aspirations, rights and responsibilities as consumers.

It is not leap of faith to state that Americans have completely accepted these consumer values. The historic level of household spending has increased and the level of savings is at rock bottom levels (Guidonlin, 2007). One current critic measures the success of American consumption not just in what we buy but also in what we buy and then do not use.  Annie Leonard (2010) claims that of the consumer goods purchased in US, only 1% are still in use after the six months.  In other words the active life expectancy of 99% of the products we consume is less than a half a year.  That's consumption on a massive scale.

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[7] There are many communities that are socially and economically marginalized, where the retail system I describe here does not exist.  I do not mean to suggest that U.S. society includes everyone, from all backgrounds, in its system of wealth-creation and distribution. However, public policy discussions focused on transforming the ghettos, barrios, and rural backwaters into places of opportunity and health never fail to include plans for providing these citizens with the retail rights of American consumers that I articulate here.

# Chapter 4: Retail Organizational Forms

This research examines two different aspects of retail organizations. Each coincides with a different growth strategy for retailers. The first aspect the geographic spread: from chain stores to independent stores. A firm that operates multiple retail establishments is chain store; a firm with only one retail establishment is an independent retailer. This means that a chain retail firm has many establishments while an independent retail firm has one establishment.

The second aspect of retail organizational form designates the scope of product categories offered by the retailer within the same establishment. This dimension ranges from single-product-category establishments to multi-product category establishments. Increasing the number of product categories is another growth strategy used by retailers. By combining the product-category dimension with the chain-independent dimension, there are four types of retail organizational forms: Chain-multi-category stores; chain-single-product category stores; independent-multi-category stores; and independent-single-product-category stores. (Figure 1 has an example of each kind of retail category.) Each of these organizational forms varies in its advantages and constraints. These, in turn, affect the survival rate of each of these organizational forms.

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Insert Figure 1 about here.

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Researchers have called attention to the many tradeoffs between organizational forms: specialist versus generalist (Freeman and Hannan, 1983; Carroll, 1985; Hsu 2006); industry group affiliation (Zuckerman, 1999); or high-volume as opposed to low-volume producer (White, 2002). Chain store firms aim to grow via additional locations while on the other hand, independent firms rely on a single location. Each form has advantages that prove beneficial under certain conditions.

## 4.1 Chain and independent retail organizational forms

A chain organization's key structural feature is a centralized bureaucracy that accomplishes critical routine tasks such as procurement and information processing. This feature significantly differentiates them from independents. Chain establishments are, by definition, monitored by entities (i.e., headquarters) outside most of the communities in which they operate, and it is in these remote locations where many key competitive resources reside or are derived. Therefore, it follows that chain and independent organizations are different organizational forms (as measured by their different structural

arrangements) and thereby draw upon distinctive sets of resources.  Chain organizations draw benefits from both local and non-local resources, while independent organizations draw benefits from local resources only. The differences in amount and location of resources differentially affect the mortality rate of chain and independent organizations.

There are two reasons that a combination of local and non-local resources may improve the life expectancy of chain establishments.  First, chain organizations transfer knowledge across geographically dispersed units (Sorenson and Sorensen, 2001), either to maintain the standardization in each chain establishment or to pass on valuable experiential learning (Bradach 1997; Ingram and Baum 1997).   Second, as local instantiations of non-local actors, chain organizations may benefit from their parent organizations' regional power (Friedland, Palmer and Stenbeck, 1990) or political muscle (Ingram and Rao, 2004).  Each of these mechanisms funnel non-local support to widely dispersed chain establishments.

Recent research that extends of the role of organizational form beyond this structurally based formulation also offers reasons why chain retailers may have better survival rates.  Close matching with environmental resources is necessary but not sufficient for resource accumulation.  Engagement, or sustained focus, is also required to make offerings known and available to targeted resources (like consumers) and to convince this audience that its offerings fit their preferences (Hannan, Carroll and Pólos, 2003; Hsu, 2006).  Without acceptance and recognition from their audience, organizations have no possibility of garnering resources they need for survival.  Engagement, then, means not only product offerings that match distinctive tastes, but also establishing a clear organizational identity as part of the communication and presentation efforts to critical audiences (Hannan, Carroll and Pólos, 2003; Hsu, 2006).  Thus, successful engagement is a precursor to improved viability.

Carroll and Swaminathan (1992, 2000) show that mortality rates for brewpubs and microbreweries (whose focused identities resonate authentically with specific taste preferences) decline under conditions of increasing competition.  Like brewpubs, retailers engage audiences with particular taste preferences.  Retailers are the lynchpin in the contemporary consumer fashion industry, distributing the material goods that reflect a myriad of styles and tastes, across social groups at all levels of social strata (Crane, 2000). From the latest Prada handbag to Kirkland (Costco) brand jeans, retailers are the site for matching needs and taste preferences to products and shopping experience. Organizational identity serves to communicate to critical audiences (consumers) a retailer's offerings, to reinforce the rules governing the behaviors of chain retailers and expectations of their consumers, and to provide the logic for why the retailer's offering best fulfills their audience's preferences.

Like other organizational tasks, chain retailers routinize the process of communicating an unambiguous organizational identity.  For example, Hot Topic sells licensed, music-inspired apparel to teenagers in mall-based stores in the U.S.  Employees are routinely screened and hired for their passion and knowledge about "what's new on the radio, in record stores, concert tours and pop culture" (Weitz and Whitfield, 2006).  Hot Topic's training programs reinforce and encourage this enthusiasm. The firm engages its audience via licensed products, store design, and advertising that coincides with music releases, tours, and movies.  Each of these activities consistently reinforces the audience's view that Hot Topic is *the* au current music-related apparel and accessories retailer.  With

consistent engagement, organizations develop strong organizational identities, resulting in lower mortality rates for these organizations (Hsu, 2006). Moreover, the separate establishments in the chain share this organizational identity in the same way that hotels share reputation across their branches (Ingram, 1996). Consistency - in standardized operations and in maintaining a strong organizational identity - is the hallmark of chain organizations and an additional advantage to chain retailers.

In contrast, independent stores profit from greater flexibility, the opportunity for experimentation, and proximity to local resources. Flexibility stems from the comparative simplicity of a single operation. Changes may take place readily, whenever the owner desires it, as there is no bureaucracy to intervene in the process. Opportunities for experimentation are tied directly to this flexibility and the focus that an owner has on operational improvement. The greatest source of experimentation among restaurants in chain firms is from franchised units, not company-managed units (Sorenson and Sorensen, 2001). Independent storeowners are likely to behave like the franchise owner/operators who have similar incentives for wealth creation.

Lastly, independent retailers enjoy face-to-face relationships with many key constituencies in their community, thanks to their proximity. Relationships with bankers, customers, suppliers, and other significant local actors offer useful knowledge (Sorenson and Roberts, 2000), as well as mutual support and valuable friendships (Festinger, Schachter, and Back, 1950). The salience of these relationships with other actors cannot be disregarded, as it is the most distinguishing and critical resource that independent establishments have access to that chain stores do not.

Given their penchant for experimentation (Dunne and Lusch 2005), independent retailers may not have as consistent communication of their organizational identity as chains. They may lack the professional skills and access to technology and advertising that allow chain retailers to convincingly communicate with their audience. However, chain stores never have the richness of engagement that independent retailers enjoy with their customers. The proximity to customers allows the owner to talk to customers, know their tastes and observe a new trend as it manifests. Additionally, chain organizations cannot focus their attention on one trade area or greatly tailor their merchandise to local tastes.

Even with the benefits accrued to independent retailers, over the long run, the chain organizational form experiences the benefits of hedging, economies of scale and scope and professional monitoring. Chain retail firms experiences economic ups and downs over many communities; the upward trends in some areas off-setting the downward trends in others. This, in combination with professional management and economies to scale, favors the survival of the chain retail form over the independent retail form. In other words, the advantages endowed to chain retailers stemming from their economies of scale, access to local and non-local resources, and maintenance of a consistent organizational identity will extend the lives of chain stores in comparison to independent stores.


H1: Chain retailers will survive longer than otherwise comparable independent retailers.

However, there may also be disadvantages associated with chains: they may be calcified and rule-bound (Hawley, 1986) and the bureaucracy characteristic of chains could become cumbersome and diminish their capacity to handle valuable, tacit information (Litz and Stewart, 1998). These problems are likely from a horizontal structure that is too cumbersome to maintain the usual economies to scale. This complexity endemic to chain retailers will place an upper bound on the benefits of chains.

H2: Chain retail establishments will survive longer as the number of establishments in the firms rises. However, the positive impact of the number of establishments will increase at a decreasing rate.

## 4.2 Multi-dimensional Organizational Form

Most previous research on organizational forms has assessed a single dimension of organizations (for exceptions see Baum and Mezias, 1992; Baum and Haveman, 1997). Clearly, focusing on a single dimension reduces the complexity of analysis, thus making a researcher's task more tractable; n dimensions produce 2n possible positions in the resource space, a quickly cumbersome analytical target (Carroll and Hannan, 2000). Nonetheless, there are reasons to consider more than one dimension of organizational form at a time. Most obvious is that a multi-dimensional view of organizational form better reflects the real choices faced by managers. For example, retailers choose between being a chain or independent store as well as between being a department store or more narrowly a home furniture store. What cannot be lost is that the alternative is not between complexity and simplicity but rather the alternative to endure complexity in one or more aspects because it may pay off in the long run.

## 4.3 Multi-Category Retailers: Organizational Form

Multi-category retailers draw customers by reducing search costs. Generally offering wide ranging product lines and maximizing breadth within those product lines, multi-category retailers appeal as one-stop shops with something for anything that customers seek. Multi-category retailers compete with other multi-category retailers and with individual retailers whose product lines are similar to those offered by the multi-category retailer's individual departments (Dunne and Lusch, 2004). Due to the emphasis on low prices, most observers assume that multi-category retailers would out-survive single category retailers (The Economist, April 17, 2004; Goldman and Cleeland, 2003).

Industry analysts label multi-category retailers as general merchandisers, whereas they classify single category retailers as specialty retailers. It is not a great conceptual leap to assert that multi-category retailers map onto the organizational form known as generalists and single-category retailers specialists. Generalist organizations need a broad array of resources, whereas specialists as a group are able to survive in a narrow band within the resource space (Carroll, 1985; Freeman and Hannan 1983; Hannan and Freeman, 1989). Specialists focus their activities on a limited set of actions, performing them reliably

and efficiently, while generalists are spread thinly across an array of activities, reducing their potential for performance in each (a Jack of all trades) (Hannan and Freeman 1977, 1989; Hsu 2006). Like good hedge fund managers, generalists distribute the risk widely, across a range of resources and therefore, over the long term, do better. All else being equal, generalists should have lower mortality rates and higher founding rates in the areas where both generalists and specialists are present.

There are however, circumstances where specialists out perform generalists: where the resource space is constricted (Péli and Nooteboom, 1999) or when the mix of resources is in frequent flux (Hannan and Freeman 1977). In both cases, specialists proliferate in-between or on the margins of the areas staked out by generalists (Freeman and Hannan, 1983; Hannan and Freeman, 1989; Carroll and Swaminathan 1992; Dowell and Swaminathan, 2000; Boone, Bröcheler and Carroll, 2000), The empirical evidence is particularly strong in mature markets with a clear market center.

The contemporary US retail sector, does not have a clear market center. Specifically, from 1992 to 1997, the four largest retail firms in the US retail industry increased their share of market from 6.8% of sales to 7.9% (US Census Bureau, 1992 Economic Census and 1997 Economic Census).[8] Instead, the arena is highly fragmented with an increasing effort to accommodate a myriad of taste profiles (Zukin, 2004; Dunne and Lusch, 2005). Unlike in previous eras, "Different styles have different publics; there are no precise rules ...[or] agreement about a fashion ideal that represents contemporary culture" (Crane, 2000 p. 135). Thus, in recent years, consumer preferences increasingly represent an expanding number of tastes and styles that have created many distinct resource positions, each relatively thin in resources. These conditions should on average favor specialist organizations (single-category retailers) over the generalists (multi-category retailers). Specialty retailers, who focus their activities on narrow product lines, may successfully communicate expertise, authenticity and exclusivity for their targeted audiences. With narrow foci and consistent engagement, specialist organizations develop strong organizational identities that contribute to lower mortality rates for these organizations operating in their specific "taste positions" in the resource space (Hsu, 2006).

Given the environment that retailers endure there seem to be more disadvantages for multi-category retailers when compared to single-category retailers. Multi-category retailers attempt to straddle broad resource spaces in markets that lack clear centers, limiting their success. Due to these limitations, multi-category retailers will have higher failure rates than single category retailers.

> H3: Multi-category retailers will not survive as long as otherwise comparable single-category retailers.

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[8] The fact that the entire retailing market has seen little increase in concentration eliminates the use of a resource partitioning model in the following analyses, as market concentration is assumed in that model (Carroll 1985; Peli & Nooteboom 1999; Boone, van Witteloostuijn, & Carroll 2002).

## 4.4 Organizational Form: Not Just One Tradeoff

Taken in isolation, the literature on each of these two dimensions of retail organization form provides clear predictions about the main effects on the survival of these organizations. Embracing one alternative in each dimension influences the core features and identity of the organizational form and ultimately survival in different ways. In other words, the two tradeoffs seem to influence survival in different ways. But, among the four categories of retailers, single-category independent retailers maintain the most consistency between the two dimensions because their both dimensions focus and narrow efforts. Chain multi-category establishments may be worse off than single category independent establishments due to complications from being both wide in geographic spread and product scope.

H4: Single-category independent retailers will have the longest survival among all of the retail forms, all else being equal.

H5: Chain multi-category retailers will have the shortest survival rates, among all of the retail forms all else being equal.

# Chapter 5: Retailers and Local Social Structure

## 5.1 Local resources

Organizations survive when they attain resources that they need. Some resources are geographically fixed and funneled through the local social structure (Sorenson and Audia, 2000; Freeman and Audia, 2006). Organizations with local social connections access the resources that flow through local social structure. Independent organizations are locally embedded and therefore these social structures are more important for their survival and not the survival of chain organizational forms.

Here, I expand the consequence of geographically fixed resources and their consequences for the survival of independent and chain retail organizations. By invoking the idea of locally specific resources I hope to answer the questions: What conditions improve the survival rates of independent retailers? Do the same conditions improve the survival rates of chain establishments?

Scholars in strategy and economics have identified key resources that organizations must attain: suppliers, buyers, sources of capital and labor (e.g. Porter, 1980; Bowles and Gintis, 1990). Economic sociologists have identified socially rooted resources like legitimacy, access to information and sanction (Hannan and Freeman, 1977; DiMaggio and Powell, 1983). These socially rooted resources are bestowed via public opinion, among friends and colleagues. To quote DiMaggio and Powell (1983:p.150), "Organizations compete…for social as well as for economic fitness." Each of these types of resources enable organizations to transform raw materials into goods and services that are valued by customers, as well as, to maintain their positions in an hierarchy among organizations (White, 2004; Fligstein 2002) and connections to important institutions (e.g., Mintz and Schwartz, 1985).

A market is a place, so it is not surprising that important resources for firms are located in particular places. Early economic and sociological research (Marshall, 1997(1920); Hotelling, 1929; Selznick, 1949) evaluated the role that geography and place played in the development of industries and organizations. A recent resurgence has spurred an examination of the consequences of proximal or distal resources specifcally for organizational outcomes (Baum and Sorenson, 2003; Freeman and Audia, 2006).

I attend to three specific aspects of geographically based resources. Firstly, resources are not randomly distributed across space. Instead the distribution of resources is very lumpy; for example, proximity to highways alone, versus proximity to multiple kinds of transportation corridors, not just highways, but also riverfront and public transit. Secondly, in addition to their distribution across space, some resources remain fixed in their geographic location and are available only to organizations in that location. Firms that are not proximate to fixed resources (like a river or coal mine) use them only after incurring the cost of transportation to them. Although telecommunications has transformed previously fixed resources into mobile ones (like access to government agencies or services via the Internet), there are still many important resources that remain rooted to particular localities.

## 5.2 Social structure as resource

One resource that is fixed to an area is social structure. Broadly speaking, social structure describes the types and number of groups of people in a particular location. It is the "economic, political, and social relations among individuals and groups" (Geertz, 1973, p. 362). Social structure acts as a tap facilitating the flow of information about friendship, opinions, values and approval between people in the same area. Like other resources, social structure varies in texture and depth from place to place. Local celebrations, small-town personalities, and regional cuisine are the kinds of resources that are area specific and based in that community's social structure. As an example, in an industry

An array of social structures ferry resources and opportunities to organizations. Important resources like legitimacy (Freeman and Hannan 1984), learning (Ingram and Roberts, 2000), capital (Uzzi, 1999), business opportunities (Uzzi, 1996), and sanctions (Glynn and Marquis, 2004) all may pass along and among economic and social groups. As an example, Uzzi (1996) observed that even in a context like New York's apparel industry where atomistic market exchange relationships should be most successful, close-knit connections, specifically repeated use of the same set of firms for exchange, increased the likelihood for firm survival.

What's more, local social structure systematically and differentially funnels critical resources to organizational forms that better align with those resources. For example, the nature of competition among banking organizational forms varies by region in Italy, according to local traditions (Freeman and Lomi, 1994). Typical southern Italian social and economic structures revolve around agricultural intensity and a diffuse system of craft enterprises in contrast to the urban, industrial development in the northern areas of Italy. The organizational vital rates among banks vary systematically in alignment with the local resources. Banks in the south that accommodate the agrarian traditions proliferate there. Banks in the industrial north that match the conventions there burgeon.

In another example, certain newspaper organizations flourish in areas with a distinctive composition of religious groups. Other newspaper organizations do not benefit from these special local structures. Thus, unique, geographically fixed social structure influences the life cycles of organizations that are aligned with the local social arrangements.

Surely, like banks and newspapers, retailers benefit from rich local resources funneled through social structures. However, there is little previous research to support this notion. In a singular example, Johnson (1982) examined the growth and decline of retail organizations as a function of local population and income level. The number of establishments and the average scale of retail establishment responded to both the increase and decrease in local population and income. Although the specific function of the relationships differed for growth and decline, there was a clear connection between change in local social structure (i.e. change in population and change in family income) and organizational growth.

Location and the local social structure may be important for retailers in general, but independent retailers are specifically organized to access local resources. Firstly, founders or owners are more likely to have strong social connections in the area of their establishment, endowing these firms early on. Independent retail owners are more likely to be from that locality whereas chain store managers are not (Chandler, 1977). And like

most entrepreneurs, they are likely to found their establishments in areas where they have social connections (Shane and Stuart, 2002). Prior social connections to potential investors facilitate the flow of capital and set the stage for a successful growth trajectory for firms. These kinds of connections prime independent retail organizations to draw upon the local resources that flow through the local social structure.

Secondly, independent retailers are situated to observe, understand and anticipate local fashion, cultural or lifestyle trends. Independents see the cliques in their area that make their own fashion and maintain their own tastes (Crane, 2000). Owner-managers in independent retail establishments interact with customers, see what is just outside the shop window and, thanks to their many social connections, engage with individuals in the community. While this clearly is true for apparel, book, home décor and furniture retailers, even independent hardware stores may reflect local tastes or needs. A hardware store in a resort town may stock inner tubes, ice chests and beach chairs in addition to paint, tools, and electrical and plumbing supplies. On the whole, then, independent retail organizations are aware of local preferences, needs and values before others who are outside of the area.

Thirdly, by definition independent retailers are singular establishments, with few standard operating procedures and therefore generally a less rationalized set of products. Independent stores are more focused and respond more quickly to emerging local customer trends (Dunne and Lusch, 2005). Like franchisees, independent retailers reap rewards for experimentation and innovation (Sorenson and Sørensen, 2001) and therefore do so frequently. Essentially, independent retailers' structure allows for nimbleness and flexibility to accommodate local tastes and mores.

These organizations are structured from their birth to attract the unique local resources: founders' social connections ensure local knowledge, especially local fashion preferences and idiosyncratic operations provide flexibility and responsiveness. In aggregate, these factors increase the likelihood that independent organizational forms align closely with the local resource space.

What distinguishes chain stores from independent stores is that they attract non-local resources in addition to local resources. Specifically, chains use non-local resources that emanate from headquarters. As described earlier, professional management, efficient operations facilitated by technological innovations for procurement and inventory management, and economies of scale and scope all contribute to chain stores' long-term success. These attributes also funnel other important resources for chain retailers. For example, the developers favor chain retailers with prime real estate in shopping centers (Lebhar, 1956; Jackson,1985; Zukin, 2004).

When chain organizations do exploit local resources they are not the resources that are special to that area. Instead they tap resources that appear in many communities across the United States. For example, the national consumerist culture (Holt, 2002) is one important resource that dwells with local consumers but does not originate in their local communities. The notion of a national consumerist culture describes a set of values and norms that are embraced across the United States as a result of the collective action of firms to shape public spending behavior. It has emerged over the last 25 to 30 years and resulted in individuals more closely identifying with products than with their own neighborhood (Putnam 2000; Zukin 2004; Zukin and Maguire, 2004).

Chain stores participate in the national consumerist culture as they sell predominantly national brands, support national marketing campaigns for those brands,

and create their own national advertising presence. Thus, in addition to each chain establishment applying identical trade dress and selling the identical products from store to store, they use the same language and images to attract customers to all of their locations, stretching across many different regions. Chain retail managers typically have some discretion to adjust the proportion of products stocked or to add small numbers or locally relevant products (Dunne and Lusch, 2005). For example, not all Wal-Mart stores stock snow shovels or Charlie Vergos Memphis Original Hot Barbecue Sauce. The difference between independent and chain retailers is in emphasis and target. While chain stores may add a small number of local or regional products, they are the exception. Rather than access peculiarly local preferences and norms, chain retailers draw upon and further stimulate national consumer preferences via the preponderance of products they sell, the bulk of communication they disseminate and the retail environments they construct.

Other resources used by chain retail establishments are coordinated at the headquarters level even when used at a local level. These include relationships with banks and general contractors. Chain retailers maintain repeated interactions with national real estate developers, national advertising agencies and consulting firms, and national general contractors, ensuring that chain retail establishments milk a network of local access points for a variety of key resources.

Independents do not maintain the national consumerist culture dialogue, as they have no national ad campaigns or connections to movie studios for product placement. They rely instead on local interactions and relationships to access local resources. The dimensions of local social structure that are important for independent retailers include level of urbanness, racial mix, age of the population and level of affluence. I evaluate each of these in turn.

Urban loosely means related to cities and has historically been associated with the description of areas of concentrated population where trade and administration functions are coordinated and controlled (Lincoln, 1978; Short, 1996). Urban areas have higher levels of population density, the number of people per unit area, than the surrounding areas; urban areas also house the institutions (like corporate headquarters) that direct the production and distribution of goods and services. With a larger number of people, and a location that draws many people from a broad area, cities sit at a cultural and economic cross-roads.

More recently, observers have recognized that urban areas are more than just sources of production and administrative functions. The mingling and dynamism that characterize cities create a distinct climate and culture. Increasingly cities also include industries that design cultural products specifically for the tastes of urban (or aspiring urban) denizens (Molotoch, 1996; Zukin 1998), rather those of the hinterlands. Firms that cater to the cultures and sub-cultures in cities (made up of groups like immigrants, ethnic minorities, gays and lesbians, liberals and artists) transform urban areas into sites of consumption for these distinct groups. Independent retail organizations, well-embedded in their localities, have a greater likelihood of being aligned with these relatively microscopic sets of urban lifestyles, ultimately fostering the survival of independent stores. On the other hand, since chain retailers serve the needs and desires shared by consumers nationally, they miss the highly localized preferences of urban subgroups. Additionally, the rejection of corporate control over consumption is more common in urban settings (Ingram, Yue and Rao, 2010), which also benefits the survival of independents, but not chain retailers.

Thanks to socially embedded owners and a nimble organizational structure, the survival rates for independent retail organizations improve within the most urban areas.

> H6: Being located in more urban areas, extends the survival time for independent retail establishments.

Race remains an important indicator of shopping behavior and preferences. In the 1960s and 1970s, marketing professional moved away from mass marketing, adopting techniques to serve distinct marketing segments. For the first time they included racial categories to measure part of the constellation of values and preferences that consumers embody. On the one hand, this legitimized and strengthened sub-cultural identities, giving historically marginalized groups recognition in the marketplace; on the other hand, it enriched largely white corporations (Cohen, 2003).

The existence of continued social and spatial segregation in the U.S. (Boyd, 2010) suggests that racial composition remains a salient aspect of social structure that differentiates residential communities. More importantly, individuals residing in geographic areas with relatively homogenous racial make-up demonstrate more overlap in their buying preferences with their neighbors. I suggest that independent retailers are better positioned to align with the needs and desires of individuals in these localized pockets of racial homogeneity. The limited geographic scope typical of independent retail stores, compared to chain stores, facilitates meeting the distinctive desires of the local racial group. Not needing to straddle many preferences, independent retail organizations in locations with higher racial homogeneity have higher survival rates, than those in more heterogeneous communities. More over, chain retailers do not benefit or lose based on local racial composition, as these distinctions are unrelated to the factors that improve their survival.

> H7a: The higher the racial homogeneity of a community, the longer the survival time for independent retail organizations in that community.

Consumer needs and preferences change with age. Individuals' manner, type and amount of consumption vary according to their life stage. For example, people older than 65 tend to be less mobile than other individuals (Hall, 1983; Bromley and Thomas, 1993). Therefore, older persons favor shops that are closer to their homes whereas younger, more mobile people shop farther afield. Also people at different stages of life consume and save at different rates (Ando and Modigliani, 1963), reflecting the needs of their household at that life stage. Furthermore, the types of purchases that individuals make (e.g. baby clothes, dorm accessories or jitterbug phones) change in different stages of life because their requirements change.

In areas with concentrations of people in the same age group, independent retail establishment serve their needs better than a chain store. With closer social links to the

community and greater flexibility, independent retailers align better with the homogeneous needs of more homogeneously aged populations. The age demographics of residential communities does not change the life expectancy for chain retailers, who are not positioned to attend to locally specific needs.

> H8: The more the homogeneous the mix of age groups in a community, the greater the survival times for independent retail organizations in that community.

Wealthy individuals "make more, spend more, and save more" (Danziger, 2005, p. 44) than other consumers. But their emphasis tends to be on luxury items. Moreover, affluent individuals incorporate the experience of the buying process or of the product in their cost-benefit calculus (Danziger, 2005). Independents retailers are well-match to the peculiarities of affluent customers, a resource that chain store are less able to draw on. The structural flexibility of independent retail organizations aligns well with the idiosyncratic needs of each customer, enhancing each buying experience. Also since the structure of independent retailers does not benefit from economies of scale, it is a better fit with price insensitive customers.

> H9: The greater the proportion of wealthy individuals in a community, the longer independent retail stores survive.

# Chapter 6: Retailers and local historical development

## 6.1 Local logics of action

Another set of social structures that may enhance the survival of independent retail organizational forms are local institutions. Institutions are systems that provide stability and meaning to social behavior. There are three critical characteristics of institutions that influence actors' behavior. These are cultural-cognitive systems that shape interpretation, normative systems that outline standards of appropriateness, and regulative systems that levy formal and informal constraints on behavior (Scott, 1995). Rooted in the cultural-cognitive aspect of institutions are the logics or cognitive frames that organize and mold actor's decision-making behavior (Thornton, 2002) and ultimately influence important outcomes for organizations.

Recently, researchers have demonstrated how these institutions and the logics that support them vary geographically and thereby account for variation in the behavior of individuals and organizations in different localities (Galaskiewicz 1991, 1997; Lounsbury 2007). To wit, studies (Galaskiewicz, 1991, 1997; Galaskiewicz & Burt, 1991) of the Minneapolis-St. Paul philanthropic community demonstrate the high interdependence between organizations and local institutional arrangements. This work by Galaskiewicz highlights the idea that natives are well-versed in the local institutional logics whereas outsiders must be instructed in the customs. Close social connections afford the necessary understanding and knowledge of local institutional logics to interpret them act accordingly.

Furthermore, the effects of cultural-cognitive structures on actors and organizations appear to endure for long periods of time (Kono, Palmer, Friedland, and Zafonte, 1998; Marquis 2003). Marquis (2003) for instance, showed that the founding of a locality during an era prior to airline travel had an enduring effect on the likelihood that corporations would participate in local networks, rather than be part of a network spanning a wide geographic area. These local networks were present in communities, like St. Louis, that were older, but whose local corporations were young. Thus, historical logics of action endure, and newer organizations embrace the local cultural-cognitive framework, long after their creation.

While extant research has examined the consequences of local logics of action on corporate interlocks (Kono, Palmer, Friedland, and Zafonte, 1998; Marquis 2003), no research has evaluated the effects of logics of action on the survival of firms. As discussed earlier, the survival of independent retail firms hinges to some extent on local resources because they have strong links to the local community. If there are local logics of action, independent retailers, like other local actors, would invoke those logics for problem-solving, decision-making, and coordination.

The era during which a community is founded sets in motion the physical arrangement of the community, dictating where various societal functions are allocated across space (Park and Burgess, 1925; Rae, 2003). The particular technological and cultural customs and competition for land and resources at the time direct the spread of commercial and residential building, transportation infrastructure, and the predilection for urban density. These types of development patterns are sticky, remaining durable for long periods of time. For instance, Zukin and Kosta (2004) examine the enduring character of

the East Village in Lower Manhattan, noting that it has been known for cutting-edge culture for more than a century. This function remains even as the styles of its denizens and the artists in its galleries have changed over decades, gentrification has moved through, and international tourists now come to call.

Historical development patterns are sets of logics of action, offering the rationale for the location of various functions in urban space. These logics direct the actions of local retailers in choosing a location and in determining what type and size of retail space is appropriate. Moreover important observers, such as bankers or government entities, or consumers, share these rationales, and provide support for retailers who act accordingly.

Prior to about 1920, urban areas were organized around transportation systems that accommodated pedestrians, horses and buggies, and street cars. The resulting organizing principle for commerce relied on central business districts or multiple business districts where retail and services clustered (Jacobs,1961; Jackson, 1985; Short,1996; Rae, 2003). Rural areas followed similar principles but with less density. The dominant logic for development during this period: retail occurred in the most urban area within walking or horse-riding distance to the local population. Moreover, since independent retailers were the primary retail format, they were logically part and parcel to this arrangement.

After 1920, the number of car owners exploded in the U.S. and cities through out the country constructed roads to accommodate the needs of auto traffic (Jackson, 1985; Rae, 2003). Municipalities quilted together new grids and parking areas unsystematically, without thought to regional or urban planning. At the federal level, various politicians appealed for a national system of expressways, but even giants like President Roosevelt accomplished little in this arena.

Ultimately, President Eisenhower signed the Federal-Aid Highway Act of 1956, resolving how to fund the national Interstate Highway System. This act created a pay-as-you-go system for highway construction that increased funding for U.S. highways seven-fold, clarified the cost sharing structure between Federal government and the States and committed finds to 41,000 miles of roadway (U.S. Department of Transportation, Federal Highway System, 2011). Significantly, planners designed the network of roads to most directly connect major metropolitan areas and ensure easy movement of the military in times of war. With this act, patterns of community development in the U.S. henceforth served automobiles. As the Wall Street Journal reported in 1995 "President Eisenhower . . . gave the nation its biggest construction project, the huge Interstate-highway program that changed the shape of American society and made possible the expansion of the suburban middle class" (Perry, 1995)

This moment marks a shift in the logic of urban development in the United States (Lebhar, 1956; Jackson; 1985; Short,1996; Rae, 2003) that would have major consequences for retailing[9]. Namely, large portions of the population moved out from the city center. Retailers soon followed. The new logic of how urban space was organized revolved around the car-mobile consumer. Shopping malls became the dominant logic of action for retail development, strictly segregated from many other city functions. This was significant for retail because shopping mall developers favored chain stores, adopting a logic that emphasized consistency and replicability. Independent retailers had little to no part in this system.

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[9] Please see the earlier background chapter for more details.

I suggest that in communities where the original organizing logic was based on central business districts that - in spite of the considerable changes over time - these logics of action will endure and extend the survival of independent retail establishments.  In communities where the historical organizing logic revolved around shopping mall development, independent retailers will have shorter lifespans.  Like other localized social arrangements, there will be no influence of founding date on chain retailers' life expectancy.

> H10: The greater the proportion of municipalities in the county with founding dates before 1920, the longer independent retailers survive.
>
> H11: The greater the proportion of municipalities with founding dates after 1956, the shorter independent retailers survive.

# Chapter 7: Measures, Method and Models

## 7.1 Sample

To test my hypotheses about the survival of retail establishments, I selected a sample of California retailers from 1990 to 2004 inclusive. I obtained these data from the National Establishment Time-Series (NETS) Data, 1990-2004. NETS data are constructed from annual snapshots of the Dun's Marketing Information (DMI) files identifying which establishments were active in January of each year. (A single establishment is one operating site with an address.) DMI files contain annual establishment-level data; for each establishment these data include location (address, longitude and latitude); type (single location, headquarters or branch); founding date; SIC code; employment. The essential component of the NETS data is the Dun and Bradstreet DUNS number. Dunn and Bradstreet assigns any business location with unique, separate and distinct operations an individual DUNS number, making it possible to track the life history of individual establishments.

I study Californian retailers because the state has a large and varied economy, several distinct geographic regions, and a mix of socially heterogeneous and homogeneous residential communities. California's diversity gives me substantial empirical leverage. According to the U.S. Census bureau in 1997, the number of retail establishments in California represented a whopping 9.5% among the fifty states in the U.S. In 2002, the percentage was 9.7%. No other state comes close to representing retail establishments in the U.S.; New York is a distant second at 6.7% of retail establishments in 1997 and 6.9% in 2002. California's geographic regions encompass enormous socio-economic range. There are some of the most urban areas in the U.S. (such as San Francisco) to the most rural (such as in the Mojave Desert); extremely wealthy communities like Beverly Hills and Malibu to impoverished ones like South Central Los Angeles; and a wide variety of industries: agriculture, arts, media and entertainment, high technology and financial services. Sampling Californian communities bears valid similarities to studying communities across the US, making this context highly generalizable.

The start date of the sample conforms to the opening of the first Wal-Mart store in California. This event marks escalating competition, rapidly advancing technology and productivity, and increasing salience of chain stores in public discourse about the retail industry. Two types of big-box stores - discount stores (like Wal-Mart) and "category killers" (like Home Depot) were successful in many different regions (Grewal, Krishnan, Levy and Munger, 2006). Key improvements in technology allowed for more fluid integration of suppliers, manufacturers, warehouses and stores, enhancing productivity. Moreover, industry observers perceived these changes as critical success factors for survival in this highly competitive industry (Grewal et. al., 2006). The 14 years covered by my sample include two recessions, 1994 and 2001 that significantly affected the retail industry, and the late-20th century technology boom.

I have data on every retail establishment in California every year. The unit of analysis is the establishment-year. My sample includes 514,608 retail establishments over the 14 years. My sample incorporated multi-category stores (department; warehouse; drug; and variety stores) and other retailers that carry single product lines analogous to

the separate departments in multi-category stores (apparel; accessories; home furniture; computers and software; other miscellaneous retailers). Such a large sample ensures that the result of my analysis can be generalized to retailing as a whole.

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Table 1 about here

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Table 1 shows the distribution of types of retail establishments in my sample. Among the more than half a million establishments, there are 32 categories of retailers, constituting over 3 million establishment-years and 282,541 failures. With 107,944 establishments, the "Miscellaneous Shopping Goods" category (for example, jewelry, bicycle and sewing goods stores) has the greatest frequency of stores. The least frequent category is "Dairy Products" stores of which there are only 1,066 in the sample. The failure of establishments and 3-digit SIC codes are not correlated (r=.024).

## 7.2 Dependent variable measures

I examined one outcome: length of survival of retail establishments. Failure time for each establishment was measured as years from birth (when founded) until death (when failed). Using the Akaike Information Criterion (AIC) during preliminary analysis, I found that Log-logistic Accelerated Failure Time provided the best-fitting parametric survival model. (In the Models and Methods section I elaborate on this approach to survival analysis.)

About 10% of the observations were left censored, i.e. the founding date was unknown. Since we cannot make predictions about life span if we do not know when that life began, I proceed with caution (Carroll and Hannan, 2000). Fundamentally, this is a missing data problem. Some methods for handling this situation, omitting those observations where information is missing or inserting the mean for missing data, inflict bias on the estimated parameters, reduce generalizability and threaten the soundness of statistical inference (McKnight, McKnight, Sidani and Figueredo, 2007). To avoid these pitfalls, I used a multiple imputation technique, which is the most highly accepted method for this problem (McKnight, et al, 2007, p.196). The multiple imputation technique allows for the estimation of missing information via repeatedly imputing values for missing data, and it adjusts the coefficients and standard errors for the variability between imputations. I used 20 imputations to estimate the parameters. (Varying the number of imputations did not vary my results.)

## 7.3 Explanatory variables measures: Organizational forms

I categorized retail establishments as either chain or independent based on the number of related units reported in the NETS data. I coded establishments that reported at least one other unit connected to the same corporate headquarters as chains, "1", and those with no other sister establishments as independent, "0". I choose to call retail firms with

more than one establishment chains, since this represented the beginning of economies of geographic scope.[10]

To take into account the effects of chain size, I calculated the log of the number of related establishments in the same firm. For independent establishments, the value of this variable is ln(1) = 0. The minimum and maximum for this variable are 0 and 10.2 respectively. Since independent establishments have no geographic scope and the geographic scope of chain stores is directly tied to the number of stores they have, this measure holds substantial face validity.

To distinguish between single-product retail establishments and multi-product retail establishments, I used the 3-digit Standard Industrial Classification (SIC) code for each establishment. Establishments in the "general merchandiser" category (e.g. department stores and discount department stores) or "variety stores" category carry more than one line of products; I coded these as multi-category retailers. All others are single category retailers. This is the best possible measure given the data. It validly measures retailers selling a wide variety of products as opposed to those selling a narrow selection of types of products. SIC coding, however, does not allow me to measure the breadth of product variety within each single category; it is a categorical measure, not continuous.

## 7.4 Explanatory variables measures: Social structure

For each of the hypothesized effects of social structure, I used data from the United States Census Bureau (1990 and 2000). I constructed measures of the level of urbanization, racial mix, population age and level of affluence for the county in which each establishment was located. I measured these variables at the county level for several reasons. First the data structure is along political and administrative boundaries, meaning I must use variables counted at the zip code, municipality or county level. While these are salient, zip codes and cities are not connected to the shopping habits of Californians. Highly mobile California shoppers do not confine themselves to their own neighborhood or municipality when shopping. Therefore, counties that comprise many cities more validly measure Californian shopping patterns. Other alternatives would be to use economically interdependent groups of counties, like Metropolitan Statistical Areas (MSAs) or Labor Market Areas (LMAs), for aggregating variables. Although both of these units measure significant economic and social arrangements, neither of them, carries any validity in this circumstance. MSAs do not cover rural areas and LMAs cross state lines. While rural areas are not a specific variable in my hypotheses, testing different outcomes in urbanized verses non-urbanized areas is one of my principal research questions. I cannot use LMAs as the California NETS data does not have data on neighboring states. Thus, while counties do not have perfect face validity, they are the most valid unit (among the options) for tallying my variables of interest.

For the first social structure variable, urbanization, I calculated the percentage of residents of each county that lived in an urbanized area. The Census Bureau (2000) defined urbanized areas specifically to delineate between urban and

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[10] This coding schema begs the question: When does a store reap the benefits (or hazards) of being a chain? Or similarly, after how many individual retail establishments should a firm be called a chain? I answer these empirical questions by measuring and testing the effects of chain size.

rural territory and population. A urban area comprises those "core census block groups or blocks that have a population density of at least 1,000 people per square mile and the surrounding census blocks that have an overall density of at least 500 people per square mile" (US Census Bureau, 2000). As discussed previously, the definition of urban is loose and relative. (For example, the U.S. Census Bureau has changed the definition for urban and urban areas several times. The definition of urban varies by country, too. The Office for National Statistics in the United Kingdom defines urban areas as those settlements with more than 10,000 residents.) I therefore rely on the authority of the U.S. Census Bureau to define urban in a manner most relevant to the U.S. context.

For the next social-structural variables, race and age mixture, I calculated a Herfindahl index to measure the level of concentration or homogeneity. A Herfindahl index, $H$, measures the sum of the squares of the proportions of each group within a population.

$$H = \sum_i (p_i^2)$$

This measure accounts for both the number of different groups present, $i$, and the size of the proportion of the groups, $p$. I normalized the Herfindahl index,

$$H_N = \frac{H - \frac{1}{N}}{1 - \frac{1}{N}},$$

where N is the number of groups, creating a variable that ranges from 0 to 1. In the case of race, I used the proportions of seven racial groups reported by the US Census (2000): White; Black or African American; American Indian and Alaska Native; Asian; Native Hawaiian and Other Pacific Islander; Other; and Two or more races. For age, I also used groups defined by the US Census Bureau (2000): Five To 17 Years; 18 To 24 Years; 25 To 44 Years; 45 To 64 Years; 65 To 74 Years; 75 To 84 Years; Population 85 Years And Over.

For affluence, I am interested in the influence of the variation in levels of affluence. (This is separate from the general relationship between household income and retailing activity, which I control for). To measure the effect of the level of affluence, I calculated the focal county's deviation from the median of the average household income for all 58 counties in California, again using Census Bureau (2000) data.


## 7.5 Explanatory variables measures: Historical development patterns

Logics of action vary across historical periods and metropolitan areas (Marquis, 2003). I suggest first that different logics of action materialized before the advent of an automobile-based society and after the national commitment to an interstate highway system influence. Further, these logics coincided with

community development patterns that aligned with prevailing transportation technology and continue to influence the choices of local actors, including local retailers. Non-local individuals do not use local logics of action and therefore do not benefit from them.

To measure the influence of local logics of action on the survival of retail establishments, I constructed two variables based on the founding dates of the 480 cities and towns in California. Municipality founding marks the moment when a collection of landowners administratively separates from county governance and achieves self-government and autonomy (Crouch and Dinerman, 1963). In addition, among other important roles, the founding of a city establishes the boundaries of the jurisdiction and launches formal oversight for land use and development. The founding of a city begins the institution that formally and informally defines which socio-economic activities take place and where. Decisions made at that moment seed the logics of action applied for years to come. Using data I retrieved from the League of California Cities (2010), I calculated the proportion of municipalities in each of California's counties that were founded before 1920 and secondly, I calculated the proportion of counties that were founded after 1956.


## 7.6 Control Variables

I include size, measured as log of the number of employees of each establishment. Size is an important attribute (Carroll and Hannan, 2000). To control for the competitive intensity in the vicinity of each establishment, I counted the number of new retail establishments within each county each year. I also counted the number of establishments that folded in each county each year. I lagged both to ensure exogeneity.

The retail industry in California is far too mature to demonstrate the density dependence phenomenon seen in much prior research (Carroll and Hannan, 2000). So I do not include variables for density dependence. Theoretically, there is little reason to expect a density-dependent relationship between mortality and organizational density since the 14 years under observation hardly capture the full evolution of retail industry in California, from birth to present. Nonetheless, I re-estimated all models with the density variables included, and their effects on time-to-failure were consistently small and nonsignificant.

To account for the dependency that exists between counties close to one another I measured the influence of each of the 58 California counties on the other 57. Following Hedström (1994), for each county, I calculated a variable to measure the influence of retailing activity in neighboring counties.

$$K_{ij} = \frac{1}{d_{ij}}^{(.1*R_j)}$$

where $K_{ij}$ is the inverted Euclidean distance (d) between counties $i$ and $j$, and $R_j$ is the number of retail employees in county $j$ in 2000.[11] This formula incorporates the decaying effect of retailing activity and distance between each pair of California counties.

US Census Bureau (1990 and 2000) and City and County Databooks (1988, 1994, 2002) supplied economic and geographic data about Californian counties. Using these data, I controlled for economic, geographic and demographic forces that may influence the survival of retail establishments. These sources provided measures carrying capacity for retail establishments in each county: county land area, (human) population per square mile, (human) population percentage change year over year, average retail wage and average personal income per capita. All dollar variables are in constant 1990 United States dollars, deflated with the Consumer Price Index (from the US Bureau of Labor Statistics). I lagged all control variables measuring carrying capacity (e.g. human population per square mile, average retail wage) one year. Finally, I included year effects in all models. Tables 2a and 2b presents statistics and bivariate correlations for all variables used in the multi-variate models.

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Insert Tables 2a and 2b about here.

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## 7.7 Models and analysis method

My analysis attempts to identify factors that influence the survival of retail establishments in California between 1990 and 2004. To model survival, I use the individual establishment as the unit of analysis and estimate the time to failure using an accelerated failure time (AFT) model, multiple imputation in STATA11. This technique is one option for estimating multivariate time to event (like exponential or piece-wise models) and uses maximum likelihood estimation.

With accelerated time to failure models, we specify a baseline parametric distribution of time to failure (in this case log-logistic) and then estimate the effects of explanatory variables that either accelerate or decelerate the time that passes until failure (Cleves, Gould and Gutierrez, 2004). If we imagine that all establishments are on the same basic trajectory toward demise, then some variables speed-up their time on this slide and others slow it down. I chose this model because it is very flexible and capable of modeling hazard rates that are monotonically decreasing, increasing or non-monotonic, unlike the more frequently used Weibull distribution (Bennett, 1983). Additionally, modeling with AFT metric

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[11] Other work (e.g. Sorenson and Audia 2000) has also used a distance calculation based on spherical geometry. Although this may provide a more precise distance measurement, the errors using the Euclidean formula for distances within California are trivial.

allows effects to vary overtime and for effects to vary with time. Preliminary analysis justified this choice since the Akaike Information Criterion (Akaike, 1974; Cleves, Gould, Gutierrez, 2004) for the Log-logistic model was the lowest among other possibilities (Weibull, Gomperz, Log-normal, and exponential) indicating that Log-logistic is the best-fitting model.

In the Log-logistic regression model, the failure time is *t*,

$$\ln(t_j) = \beta_0 + \mathbf{x}\beta_x + u_j,$$

where *u* follows a logistic distribution with mean 0 and standard deviation $\pi\gamma/\sqrt{3}$. The ancillary parameter, $\gamma$, indicates the shape of the hazard rate. If the $\gamma <$ 1, the log-logistic hazard rate increases and then decreases. If $\gamma \geq$ 1, then the hazard rate is monotone decreasing (Cleves, Gould and Gutierrez, 2004). The vector of time varying and time invariable covariates is $\mathbf{x_j}$. The estimates were fit using STATA's streg command with the distribution option for log-logistic.

The data are nested with observations grouped by their location within one of 58 California counties. The failure-time models include STATA's cluster option that produces robust standard errors. STATA reports the average relative variability increase (RVI) across coefficients as a result of the multiple imputations of establishment founding dates. The reported RVI for my models is zero. Additionally, due to the computational requirements for a dataset of this size, over 5 million establishment-years, I performed all of the estimates on a 15% random sample of the data. I repeated this process with 10% and 20% random samples and found similar results. Tables 3, and 4a and 4b report results for the 15% random sample.

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Insert Tables 3, 4a and 4b about here

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# Chapter 8: Results


All models show the results at the establishment level.  The first model, in Table 3, shows the time to failure for all retail establishments whether chain or independent, including the control variables.   Not unexpectedly, the effect of the scale of the establishment on the time to failure is statistically significant and positive. It takes longer for larger establishments to fail, holding other variables constant. Two other control variables have statistically significant effects. First, the number of failed establishments in the previous year has a small, significant and negative effect. Secondly, personal income per capita significantly delays the time to failure. In general, larger establishments located in areas with a higher average income survive longer. Even though parsimony suggests that any control variables with very small parameters estimates, like total county population or the decay influence of proximate counties, be eliminated from the models, I choose not to do so. Although the parameter estimates are small, omitting these small, significant effects influences the magnitude, direction and statistical significance of the parameter estimates for some variables of interest.

The results tables also report the estimated parameter for $\gamma$.   When $\gamma$ is less than one the expected log time-to failure increases then decreases.   That is to say, young establishments have a higher likelihood of failure, up to a point.   Then, the failure rate decreases with age.  In Model 1, $\gamma$ is .5448, nonmonotonic and remains so in the rest of the estimated models.

Turning to the hypothesized effects, Model 2 estimates that chain stores (regardless of whether the establishment is a single or multi-category retailer) have longer time to failure than independents.  Put another way, it takes longer for chain establishments to fail, compared to independent establishments, all other things being held constant.  This result supports hypothesis 1. The results in Model 2 also show that the effect for average retail wages in the county is negative and statistically significant. In this model I've parsed out the effect for chain establishments, compared to independent establishments. Therefore, the average retail wages in the county accelerate the time to failure for the base case, independent stores, not on chain stores. This foreshadows a later discussion about proximate social structure and its importance for independent stores.

Also in Model 2 there is a change in the effect of the scale of the establishment on time to failure. Although still positive and statistically significant, the effect is diminished by an order of magnitude. This suggests that chain establishments accrue benefits from establishment size, and independent establishments do so minimally.

Model 3 provides support for hypothesis 2, without substantially changing the results from Model 2. The coefficient for the size of the chain (natural log of the number of stores) is positive, as predicted, while the sign of the coefficient for the dummy variable designating a chain establishment is smaller, but still positive and significant. These results parse out the separate effect of being a chain establishment from firm size: both extend the time to failure and are highly significant. The effect of chain (while diminished from the results from Model 2) is larger than those for firm size.  A one percent increase in the number of establishments in the firm extends the log time to failure by .141.  To put it another way, for a chain establishment predicted to fail at 5 years (using the baseline

survivor function and with all other covariates held constant), a one percent increase in the number of establishments in the firm delays failure by one year. For a chain establishment predicted to fail at 10 years, a one percent increase in the number of establishments in the firm reduces the time to failure by about 2 years. Stating the results in this way, while being more concrete, also illustrates the accelerated marginal effects of the log of the number of establishments in the firm. With an accelerated time to failure model, the older the establishment is, the greater the marginal effect of each positive parameter estimate.

Note, too, that given the log form of the size variable, the returns to size diminish with size. As the number of units increases, a larger absolute number of establishments is needed to gain the same delay in time to failure. These results suggest that compared to independent establishments being a chain establishment is helpful and, in fact, is more helpful than adding establishments to the firm. The hypothetical increases to economies to scale and geographic scope are greater for chain retailers growing on a base of a small number of stores than growing on a base of a large number of stores.

Model 3 also confirms the limited importance of establishment scale for independent retailers. The parameter estimate is statistically insignificant. The variance accounted for by chain status and firm size eliminate the effect for establishment size altogether. Thus, an establishment's scale is inconsequential for independent stores.

Contrary to hypothesis 3, Model 4 shows that single category retail establishments (regardless of chain or independent store status) do not survive as long as multi-category establishments. This effect is significant. Since Model 4 does not include the dummy variable for chain stores, it is not clear if the effect is the same for chain and independent establishments. Next, the results presented in model 5 show that the main effects for chain store status and multi-category status remain in the presence of each other in the model; they are still positive and significant. In Model 6, the results indicate that there is a positive effect for the interaction between multi-category and chain store status, but until Model 7 we do not have a clear idea as to whether this multiplicative effect is significant beyond the main effects for multi-category status.

The results shown in Model 6 do not hold up in Model 7, which includes main effects for the dummy variables chain and multi-category, in addition to the interaction effect. The main effects for chain store status, the size of the firm and multi-category store are robust, remaining statistically significant with the same effect size. The effect of the interaction term, multi-category x chain, is equal to the effect for multi-category alone and is positive, as hypothesized. Yet, the standard error is too large to conclude that the interaction effect of being a chain and multi-category store is statistically different from randomness.

In spite of not having significant evidence for the hypothesized interaction effect (between chain and multi-category variables), the main effects are substantial and informative. Being a chain store improves the time to failure for all stores, single- or multi-category. For the baseline independent establishment, whether single or multi-category and holding all other variables constant, increasing the number of units from 1 to 3, extends predicted time to failure three-fold.

Multi-category status is also consequential. For an independent establishment that otherwise has an average life expectancy, shifting to multiple product lines, increases time to failure by 12.5%. The magnitude of this predicted effect for multi-category status is similar for chain stores, but not statistically significant.

Taken together these results emphasize two key points. Firstly, it is not enough to ask, "Is it a chain store or not?" because categorical descriptions are insufficient. To understand the effect of chain status on life expectancy, we must know the size of the chain or, to state it a different way, the extent of chain-hood. The influence of increasing chain-hood for independent firms moving to chain status or for smaller chain retailers increasing in size is larger than the influence on firms with an extensive number of establishments already. Secondly, without considering the heterogeneity among independents (i.e. that some are single category retailers and others are multi-category retailers) it is not clear how the tradeoffs between narrow product scope and complexity influence longevity.

Tables 4a and 4b present the results for the effects of social structure on independent and chain retailers separately. First Model 8 shows the results with the control variables, but only for independent establishments. Model 9 shows the same for chain establishments. Of note, the multi-category dummy is statistically significant for independents but not for chain stores, confirming earlier results. Also, the opposite effect of establishment size on independent and chain establishments is clear here. The parameter estimate for establishment scale is negative and significant for independent retailers and positive and significant for chain stores. Greater scale reduces the time to failure for independent establishments whereas time to failure improves chain establishments with an increase in establishment size. Finally, the only other control variable with strong significant effects is the personal income per capita in the county. The influence of personal income per capita is large and statistically significant for both independents and chain establishments.

Models 10 through 17 show that independent retailers are affected by their local social structure while chain retailers are not. Moreover, the effects of three out of four social structure variables on the independent establishments' time to failure are positive. This supports the general argument laid out above. The results, however, are not always in the directions predicted by specific hypotheses. The higher the concentrations of racial groups and the higher the percentage of urban dwellers, the quicker independent retailers' time to failure. The parameter estimates are opposed to the direction predicted in hypotheses 6 and 7. But, as predicted in hypotheses 8 and 9, greater concentrations of individuals from different age groups and the more affluent the county the longer independent retailers' life spans.

Although, I developed no hypotheses about local social structure and chain establishments, I estimated models on chain establishments as well. Intriguingly none of the measures of local social structure have significant effects on chain retailers. In combination, these preliminary results suggest that local social arrangements have a statistically significant influence on independent stores' life expectancy, but have limited influence on chain stores' life expectancy. These results support my arguments about the distinct differences between independent and chain retailers and their connections to the residential communities in which they operate.

The results for local historical development and their influence on the time to failure for each category of retailers follow a similar pattern. Models 18 and 19 show that in counties with more cities incorporated before the advent of cars (before 1920), independents' time to failure is longer. Similarly, in localities with more cities founded after the establishment of the interstate system (after 1956), the independent retailers' time to

failure is shorter. Measures of local development patterns are irrelevant for chain retailers' time to failure; both parameter estimates are nonsignificant.

Models 22 and 23 include all of the variables for social structure and urban development, parsing out each distinct effect for independent and chain retailers. Contrary to the results in Model 10, the greater the percentage of urban population, the longer independents' the time to failure. This supports hypothesis 6. Also as shown in Model 22, two other variables have statistically significant results: the effect of the concentration of racial groups in a county remains negative and the effect of the difference between the wealth of the county and the average Californian county remains positive. In the full model, there is no statistically significant effect of the concentration of age groups or municipalities' development patterns on independent establishments' time to failure.

The picture is completely different for chain establishments. None of the local variables has an effect on chains' time to failure. Whereas the coefficients for the social structure variables for independent retailers were not always in the hypothesized direction, each demonstrates that social structure is a highly significant factor for independent retailers and of little consideration for chain retailers. This finding should not be belittled: it points to the important connection between independent retailers and local social arrangements, for ensuring access to vital resources. Chain retailers have little need of local social structures, as they are superfluous for them.

## Chapter 9: Discussion

Taken together, the results emphasize several key points. Firstly, utilizing one dimension to define organizational form may lead analysts to draw erroneous conclusions about the influence of a particular organizational structure on organizational survival. Heterogeneity independent retailers (i.e., the mixture of single- and multi-category establishments) is a significant factor in predicting survival time. Without parsing this factor out, our conclusions are spurious. Not only may a single dimension of organizational form be insufficient for understanding mortality rates, but multiple effects may be required to fully understand the comparative life expectancies of organizational forms. This is of particular importance given the amount of extant research that has been done that only attends to one categorical dimension to predict organizational survival (Carrol and Hannan, 1989; Boone, 2000; Carroll and Swaminathan, 2000).

More substantively, my results suggest that tradeoffs managers make in organizing and positioning their firms in comparison to others in the market should not be viewed in isolation (White, 1981, 1992; Fligstein, 2001). Retail firms trade off between chain or independent organizational forms *and* between multiple-product-category and single-product-category organizations. More importantly, for independent retailers in particular, the additive effect of these choices can be a critical determinant of survival. Finally, it cannot be overlooked that attributes that often are taken for granted as beneficial for survival, like scale, may not be significant for some firms. For a retailer, the best position seems to depend upon what type of firm it is.

The results from the second and third set of hypotheses add to the stream of research concerned with understanding how context influences economic exchange (Marquis, 2003; Freeman and Audia, 2006). Retailers are situated in communities of people with different tastes, values, levels of income and ethnic backgrounds. Individuals in the same community also share a common logic that is culturally conveyed and guides action. Independent retailers who are aware and understand these locally specific structures benefit from the resources that flow from them, enhancing their survival. These benefits do not accrue to chain stores who are not socially linked to all of the communities in which they operate.

The background chapter of this dissertation described the arc of events that in combination have molded the retail system of the United States. In particular the technological and social changes that have occurred in the last 30 years have favored the chain retail organizations. Many people in reading this section might question whether there is a place for independent retailers in our future. If anything can be learned from the results of the quantitative analyses is that there is a close connection between independent retailers and their immediate social environments. It is this connection that will ensure that independent retailers will remain in our midst.

Finally, there is a clear empirical contribution in this research as well, using multiple imputations to deal with missing data. Usually, ecological studies depend on complete life histories or complete population for analysis. The technique of

multiple imputation may open different avenues for research previously limited by data constraints.

The conclusions reached as a result of this analysis are limited in several ways. Firstly, the context may not be generalizable to other situations as these fourteen years of retail life may have peculiarities which prevent us from applying these results elsewhere. As an example, the time period during this study, while dynamic, may prove to be unique in the level of transformation. Secondly, the key variables, which are intended to measure organizational population dynamics, are counted at the county level. The opportunity to examine these same questions using actual distances or driving times might provide new insight. Finally, in using categorical variables for our some of the predictor variables, we may have lost empirically significant variability among the different organizational forms. Future research will be geared toward addressing these issues.

The findings here suggest that scale is not important for independent retailers and that the greatest benefits of being a chain accumulate as very small chains broaden their reach. This brings to mind Scott's question about what we mean by size. Does size indicate capacity, performance, power or complexity? In the retail world depicted in the media, size is rarely clearly defined, although it is frequently the big Big Box stores that conjure fear (Cleeland et al. 2003), which could measure product variety, breath or chain. Even when organizational sociologists measure the size of an organization, the meaning associated with this measurement may be unclear (Scott 2003). The extent of a chain organization's spread describes internal, structural relationships, but is also strongly influenced by the external conditions that an organization faces. Size, like technology, is a variable at the boundary between organization and environment (Scott, 2003). Establishments that proliferate in multiple communities have found the sweet spot between geographic scope and managing potentially conflicting contexts. This should be generalizable to all multiunit firms, not just retailers. Future research should evaluate all of these dimensions of size: scale, product breadth and extent of geographic scope (numbers of establishments AND how far spread).

This line of reasoning suggests that viewing chains as all being created equal is a false start to our thinking about multi-unit firms. The better question is which chains are best able to maximize the advantages of their form? In what communities will they continue to reap these benefits? Does the amount of geographic spread moderate these advantages associated with chains? A more contingent view of chain organizations may also integrate seemingly contradictory research and suggest where and when Mom and Pop's should hold out hope. Ultimately we may be able to suggest which and when certain strategic moves (like choosing specialism or generalism) will benefit chain or independent establishments. This area is unexplored and offers a fruitful research program going forward.

## Chapter 10: Conclusion

Unlike prior research on retail organizations, this dissertation examined the competitive dynamics between different kinds of retailers and the social structures that prolong the life of socially embedded retail organizations. In doing so, the dissertation contributes to organizational theory and economic sociology. The findings offer important contributions to our understanding of the relationships between the local social structure and organizational survival and the multi-dimensional nature of organizations and survival.

The first chapter in this dissertation emphasized the role that retailing plays in U.S. society and the deep connections between retail commerce, communities and culture. Additionally, it serves as a backdrop to the theoretical discussions in later chapters that view independent retailers as threads in the local social fabric. Finally, this chapter motivates and justifies retailing as a worthy case for study. The exchange between shopkeeper and consumer is so commonplace we might think it unremarkable. In highlighting the significant position retailing has in the US, the first chapter inveighs us to explore it further.

Chapter two focused on the multi-dimensional character of retail organizations and the spurious conclusions we might draw about the importance of these dimensions if we evaluate them in isolation. The findings suggest that to best predict the trajectory of survival for retailers we need to evaluate multiple aspects of that retailer. Specifically, chain organizations do enjoy longer survival times than independent retailers but the benefit largely stems from being a chain, rather than being one of extra-ordinary size. Surprisingly to some, independent retail organizations may survive longer when they chose a multi-product line strategy.

Future research on the survival of retailers should look at the returns to size at the establishment and the firm level. Accounting for the level of "chain-ness" and level of "non-localness" are likely to further illuminate how deep the connection to local social structure needs to be to offer survival benefits. Moreover, since many observers believe that there is an asymmetric exchange between non-local firms and the communities in which they operate, future studies might explore what resources accrue to communities as a result of the activities of chain or independent organizations. This would further our understanding of the importance of embeddedness for economic exchange.

Chapters three and four examined different ways that local resources may flow to independent retailers, but not chain retailers. The findings suggest that local social structures and institutions convey resources that are largely superfluous for the survival of chain retailers, but significantly improve the survival time for independent retailers. The flow of these structures hinges on the relationships and knowledge that independent retailers have about their communities that chain retail firms do not. Future studies might examine these mechanisms at a small level of analysis to more closely measure these mechanisms. Iterating up and down levels of analysis would more fully describe the resources that flow via social structure and construct a finer grained map of the benefits of embeddedness for retailers and other organizations.

Frequently as academics evaluate the competitive dynamics among firms we describe the partitioning of resource space as if it were a clinical activity: sterile and for our

own good. By maintaining a focus on the connections between organizations and their communities, I hope to remember that the competitive dynamics between an underdog and 900 pound gorilla are not just sport.

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# Appendix

**Figure 1. Examples of retailers in each organizational form**

|  | Chain | Independent |
|---|---|---|
| **Single Category Retailer** | William Sonoma | Vintage Wine Merchants |
| **Multi-Category Retailer** | Sears | Mom & Pop General Store |

Table 1: Frequency of subjects, observations and failures across three-digit SIC codes

| SIC-3 | Description | Subjects: Number of Establishments | Observations: Number of Establishment-years | Number of Failures |
|---|---|---|---|---|
| 521 | Lumber and Other Building Materials | 8,913 | 59,017 | 4684 |
| 523 | Paint, Glass, and Wallpaper Stores | 5,074 | 33,524 | 2633 |
| 525 | Hardware Stores | 5,477 | 37,744 | 2878 |
| 526 | Retail Nurseries and Garden Stores | 4,711 | 34,868 | 2490 |
| 527 | Mobile Home Dealers | 1,433 | 8,377 | 834 |
| 531 | Department Stores | 2,671 | 21,782 | 1076 |
| 533 | Variety Stores | 4,059 | 24,637 | 2002 |
| 539 | Misc. General Merchandise Stores | 3,185 | 18,399 | 1786 |
| 541 | Grocery Stores | 33,672 | 249,665 | 14038 |
| 542 | Meat and Fish Markets | 3,362 | 22,005 | 1802 |
| 543 | Fruit and Vegetable Markets | 2,082 | 11,360 | 921 |
| 544 | Candy, Nut, and Confectionery Stores | 2,292 | 14,064 | 1315 |
| 545 | Dairy Products Stores | 1,066 | 8,435 | 508 |
| 546 | Retail Bakeries | 10,201 | 74,755 | 4440 |
| 549 | Miscellaneous Food Stores | 14,326 | 82,848 | 7372 |
| 553 | Auto and Home Supply Stores | 18,300 | 122,244 | 9649 |
| 561 | Men's & Boys' Clothing Stores | 7,945 | 49,477 | 4620 |
| 562 | Women's Clothing Stores | 24,737 | 143,470 | 14 248 |
| 563 | Women's Accessory & Specialty Stores | 9,293 | 48,599 | 7 132 |
| 564 | Children's and Infants' Wear Stores | 4,522 | 24,599 | 2 750 |
| 565 | Family Clothing Stores | 4,936 | 26,824 | 2 687 |
| 566 | Shoe Stores | 11,568 | 70,461 | 6 179 |
| 569 | Misc. Apparel & Accessory Stores | 15,040 | 88,543 | 8 243 |
| 571 | Furniture and Home furnishings Stores | 40,747 | 249,932 | 23 425 |
| 572 | Household Appliance Stores | 6,479 | 43,709 | 3 904 |
| 573 | Radio, Television, & Computer Stores | 37,960 | 218,013 | 21 539 |
| 591 | Drug Stores and Proprietary Stores | 7,726 | 63,105 | 3 073 |
| 592 | Liquor Stores | 10,075 | 84,356 | 4 530 |
| 593 | Used Merchandise Stores | 21,160 | 131,225 | 12 117 |
| 594 | Miscellaneous Shopping Goods Stores | 107,944 | 646,806 | 64 266 |
| 598 | Fuel Dealers | 1,335 | 9,143 | 765 |
| 599 | Retail Stores, Not Elsewhere Classified | 82,317 | 490,057 | 44 635 |
| | Totals | 514,608 | 3,212,043 | 282,541 |

# Table 2a: Pairwise Correlations and Descriptive Statistics

| | Mean | St. Dev | Min | Max | 1. | 2. | 3. | 4. | 5. | 6. | 7. | 8. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Chain (yes=1) | 0.174 | 0.379 | 0.000 | 1.000 | 1.000 | | | | | | | |
| 2. Multi-category (yes=1) | 0.023 | 0.151 | 0.000 | 1.000 | 0.154 | 1.000 | | | | | | |
| 3. Size of firm:Ln (establishments in firm) | 0.948 | 2.249 | 0.000 | 10.274 | 0.888 | 0.178 | 1.000 | | | | | |
| 4. Percentage of population in urbanized area$_c$ | 0.883 | 0.218 | 0.000 | 1.000 | 0.031 | -0.014 | 0.028 | 1.000 | | | | |
| 5. NHI for Race $_c$ | 0.329 | 0.143 | 0.195 | 0.869 | -0.013 | -0.001 | -0.011 | -0.648 | 1.000 | | | |
| 6. NHI for Age $_c$ | 0.066 | 0.012 | 0.033 | 0.114 | -0.003 | -0.014 | -0.013 | 0.366 | -0.329 | 1.000 | | |
| 7. Deviation from CA median HHI $_c$ | -1.688 | 10.468 | -27.435 | 19.378 | -0.031 | 0.018 | -0.024 | -0.377 | -0.056 | -0.551 | 1.000 | |
| 8. Percentage of Cities established before 1920 $_c$ | 0.439 | 0.169 | 0.000 | 1.000 | -0.018 | 0.005 | -0.017 | -0.530 | 0.288 | -0.176 | 0.135 | 1.000 |
| 9. Percentage of Cities established after 1956 $_c$ | 0.402 | 0.152 | 0.000 | 1.000 | 0.001 | -0.014 | -0.003 | 0.525 | -0.199 | 0.208 | -0.096 | -0.764 |
| 10. Decay of influence of other CA counties$_c$ | 1115.191 | 303.101 | 327.111 | 1675.772 | 0.020 | -0.015 | 0.017 | 0.450 | -0.164 | 0.515 | -0.704 | -0.195 |
| 11. Lagged # new establishments/1000$_c$ | 3.032 | 3.616 | 0.000 | 14.446 | -0.027 | 0.003 | -0.025 | 0.373 | -0.534 | 0.046 | 0.283 | -0.273 |
| 12. Lagged # failed establishments/1000$_c$ | 2.215 | 2.711 | 0.000 | 11.766 | -0.017 | 0.005 | -0.016 | 0.362 | -0.523 | 0.051 | 0.273 | -0.258 |
| 13. Land Area/1000$_c$ | 3.466 | 3.788 | 0.047 | 20.062 | 0.014 | 0.014 | 0.023 | -0.075 | -0.126 | -0.293 | 0.447 | 0.052 |
| 14. Annual population change 1990-2000$_c$ | 1.249 | 1.067 | -5.020 | 24.150 | 0.012 | 0.008 | 0.017 | -0.193 | 0.218 | -0.326 | 0.139 | 0.035 |
| 15. Average retail wage 1997/1000$_c$ | 0.019 | 0.001 | 0.008 | 0.022 | 0.018 | -0.019 | 0.010 | 0.707 | -0.380 | 0.635 | -0.740 | -0.293 |
| 16. Personal income per capita/1000$_c$ | 0.002 | 0.001 | 0.001 | 0.006 | -0.027 | -0.024 | -0.033 | 0.390 | -0.018 | 0.639 | -0.735 | -0.168 |

Note: This table presents pairwise correlations and summary statistics from a 15% random sample of the NETS California data, 1990-2004, and sata from the US Census Bureau. The subscript C refers to calculations made at the county level.

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**Table 2b: Pairwise Correlations and Descriptive Statistics continued**

| | 9. | 10. | 11. | 12. | 13. | 14. | 15. | 16. |
|---|---|---|---|---|---|---|---|---|
| 9. Percentage of Cities established after 1956$_C$ | 1.000 | | | | | | | |
| 10. Decay of influence of other CA counties$_C$ | 0.185 | 1.000 | | | | | | |
| 11. Lagged # new establishments/1000$_C$ | 0.369 | -0.186 | 1.000 | | | | | |
| 12. Lagged # failed establishments/1000$_C$ | 0.352 | -0.181 | 0.758 | 1.000 | | | | |
| 13. Land Area/1000$_C$ | -0.068 | -0.293 | 0.074 | 0.066 | 1.000 | | | |
| 14. Annual population change 1990-2000$_C$ | -0.096 | -0.016 | -0.221 | -0.227 | 0.240 | 1.000 | | |
| 15. Average retail wage 1997/1000$_C$ | 0.308 | 0.619 | 0.177 | 0.176 | -0.395 | -0.242 | 1.000 | |
| 16. Personal income per capita/1000$_C$ | 0.228 | 0.526 | -0.078 | -0.046 | -0.443 | -0.322 | 0.699 | 1.000 |

Note: This table presents pairwise correlations and summary statistics from a 15% random sample of the NETS California data, 1990-2004, and sata from the US Census Bureau. The subscript C refers to calculations made at the county level.

**Table 3: Loglogistic Time-To-Failure (AFT) Regression of Survival for Chain and Independent Retailers in California, 1990-2004**

| Model # | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
|---|---|---|---|---|---|---|---|
| Chain store (yes=1) | | 0.906** | 0.271** | | 0.276** | 0.274** | 0.277** |
| | | (0.021) | (0.033) | | (0.034) | (0.034) | (0.034) |
| Firm size:Ln (establishments in firm) | | | 0.141** | | 0.139** | 0.139** | 0.139** |
| | | | (0.006) | | (0.006) | (0.006) | (0.006) |
| Multicategory (yes=1) | | | | 0.224** | 0.167** | | 0.139** |
| | | | | (0.034) | (0.034) | | (0.037) |
| Multi-category x Chain store | | | | | | 0.279** | 0.139 |
| | | | | | | (0.084) | (0.092) |
| Establishment scale: Ln (employees at establishment) | 0.250** | 0.029** | -0.01 | 0.243** | -0.013 | -0.015 | -0.016 |
| | (0.007) | (0.008) | (0.008) | (0.007) | (0.008) | (0.009) | (0.009) |
| Decay of influence of other CA counties | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| Lagged # new establishments/1000$_C$ | 0.000 | 0.000 | 0.000 | -0.001 | 0.001 | 0.001 | 0.001 |
| | (0.003) | (0.003) | (0.003) | (0.003) | (0.003) | (0.003) | (0.003) |
| Lagged # failed establishments/1000$_C$ | -0.012* | 00000 | 00000 | -0.012* | -0.007 | -0.007 | -0.007 |
| | (0.005) | (0.005) | (0.005) | (0.005) | (0.005) | (0.005) | (0.005) |
| Land Area/1000$_C$ | -0.001 | 00000 | 00000 | -0.001 | -0.001 | -0.001 | -0.001 |
| | (0.001) | (0.001) | (0.001) | (0.001) | (0.001) | (0.001) | (0.001) |
| Total population$_C$ | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| Annual population change 1990-2000$_C$ | 0.000 | 0.000 | 0.000 | -0.002 | -0.001 | -0.001 | -0.001 |
| | (0.006) | (0.006) | (0.006) | (0.006) | (0.006) | (0.006) | (0.006) |
| Average retail wage 1997/1000$_C$ | -11.102 | -15.591* | -16.189* | -10.861 | -16.010* | -16.095* | -15.995* |
| | (7.848) | (7.696) | (7.678) | (7.844) | (7.673) | (7.679) | (7.675) |
| Personal income per capita/1000$_C$ | 45.48** | 47.096** | 52.289** | 46.168** | 52.677** | 52.434** | 52.682** |
| | (16.689) | (16.288) | (16.258) | (16.694) | (16.258) | (16.262) | (16.26) |
| Constant | 1.782** | 2.038** | 2.077** | 1.779** | 2.074** | 2.081** | 2.077** |
| | (0.111) | (0.109) | (0.109) | (0.111) | (0.109) | (0.109) | (0.109) |
| Gamma | .5448 | .5339 | .5320 | .5448 | .5319 | 457855 | .5319 |

Note: This table presents Loglogistic regression (accelerated failure-time form) of time to failure of retail establishments from a 15% random sample of the NETS California data, 1990-2004. The number of oberservations = 457942.  Average relative increase in variance (over all coefficients) due to multiple imputations of missing founding dates is zero in all models. Robust standard errors are reported in parentheses. The subscript C refers to calculations made at the county level. All models include fixed effects for each year.  I omitted the coeffcients for the year control variables to save space.  The gamma parameter lower than one indicates that the loglogistic hazard increases and then decreases.The number of oberservations = 457942
* indicates p<.05, ** indicates p<.01.

**Table 4a: Loglogistic Time-To-Failure Regression of Survival Chain and Independent Retailers, California 1990-2004**

| Model # | (8) | (9) | (10) | (11) | (12) | (13) | (14) | (15) | (16) | (17) |
|---|---|---|---|---|---|---|---|---|---|---|
| Independent (I) or Chain (C), establishment | I | C | I | C | I | C | I | C | I | C |
| Percentage of population in urbanized area $_c$ | | | -0.092** (0.035) | -0.276 (0.174) | | | | | | |
| NHI for Race $_c$ | | | | | -0.156** (0.048) | 0.252 (0.22) | | | | |
| NHI for Age $_c$ | | | | | | | 2.525** (0.616) | -3.555 (2.416) | | |
| Deviation from CA median HHI $_c$ | | | | | | | | | 0.006** (0.001) | 0.011 (0.005) |
| Percentage of Cities established before 1920 $_c$ | | | | | | | | | | |
| Percentage of Cities established after 1956 $_c$ | | | | | | | | | | |
| Multicategory (yes=1) | 0.141** (0.037) | -0.11 (0.107) | 0.135** (0.037) | -0.113 (0.107) | 0.140** (0.037) | -0.110 (0.107) | 0.140** (0.037) | -0.109 (0.107) | 0.139** (0.037) | -0.110 (0.107) |
| Size of firm:Ln (establishments in firm) | | 0.122** (0.008) | 0.122** (0.008) | 0.122** (0.008) | 0.122** (0.008) | 0.122** (0.008) | 0.121** (0.008) | 0.121** (0.008) | 0.122** (0.008) | 0.122** (0.008) |
| Scale: Ln (employees at establishment) | -0.113** (0.010) | 0.299** (0.024) | -0.130** (0.010) | 0.299** (0.024) | -0.113** (0.010) | 0.299** (0.024) | -0.113** (0.010) | 0.299** (0.024) | -0.113** (0.010) | 0.298** (0.024) |
| Decay of influence of other CA counties | 0.000 (0.000) | 0.000 (0.000) | 0.000 (0.000) | -0.000 (0.000) | 0.000 (0.000) | 0.000 (0.000) | 0.000 (0.000) | 0.000 (0.000) | 0.000 (0.000) | 0.000 (0.000) |
| Lagged # new establishments/1000 $_c$ | 0.001 (0.003) | -0.009 (0.017) | 0.001 (0.003) | -0.011 (0.017) | 0.002 (0.003) | -0.011 (0.017) | 0.001 (0.003) | -0.009 (0.017) | 0.001 (0.003) | -0.009 (0.017) |
| Lagged # failed establishments/1000 $_c$ | -0.007 (0.005) | -0.002 (0.032) | -0.007 (0.005) | -0.006 (0.032) | -0.006 (0.005) | -0.006 (0.032) | -0.008 (0.005) | -0.001 (0.032) | -0.007 (0.005) | -0.004 (0.032) |
| Land Area/1000 $_c$ | -0.001 (0.001) | -0.008 (0.005) | 0.000 (0.001) | -0.006 (0.005) | -0.002 (0.001) | -0.007 (0.005) | -0.002 (0.001) | -0.006 (0.005) | -0.001 (0.001) | 00000 (0.005) |
| Annual population change 1990-2000 $_c$ | -0.005 (0.006) | 0.048* (0.024) | -0.006 (0.006) | 0.049* (0.024) | 0.000 (0.006) | 0.040 (0.025) | -0.002 (0.006) | 0.043 (0.024) | -0.002 (0.006) | 0.050* (0.024) |
| Average retail wage 1997/1000 $_c$ | -12.117 (7.905) | -64.843 (36.517) | -2.067 (8.668) | -43.684 (39.025) | -20.674* (8.258) | -51.74 (38.581) | -13.93 (7.975) | -61.47 (36.383) | 9.40 (8.687) | -21.61 (40.458) |
| Personal income per capita/1000 $_c$ | 45.402** (16.966) | 151.153* (68.442) | 40.636* (16.945) | 151.161* (68.880) | 62.887* (17.75) | 00126 (72.513) | 13.810 (18.564) | 192.888** (74.498) | 93.529** (19.456) | 221.042** (77.022) |
| Constant | 2.145** (0.112) | 2.260** (0.539) | 2.133** (0.113) | 2.261** (0.548) | 2.348** (0.127) | 1.949** (0.607) | 2.126** (0.113) | 2.278** (0.535) | 1.591** (0.148) | 1.236** (0.689) |
| Gamma | .526 | .659 | .526 | .659 | .526 | .659 | .526 | .659 | .526 | .659 |

Notes: This table presents Loglogistic regression (accelerated failure-time form) of time to failure of retail establishments from a 15% random sample of the NETS California data, 1990-2004. For models of time to survival for independent establishments, N= 399,591, for chain establishments, N=58,264. Average relative increase in variance (over all coefficients) due to multiple imputations is zero in all models. Robust standard errors are reported in parentheses. The subscript C refers to calculations made at the county level. All models include fixed effects for year and a total population control variable, which I omitted to save space. Gamma parameter lower than one indicates that the loglogistic hazard increases and then decreases.   * indicates p<.05, ** indicates p<.01.

**Table 4b: Loglogistic Time-To-Failure Regression of Survival Chain and Independent Retailers, California 1990-2004**

| Model # | (18) I | (19) C | (20) I | (21) C | (22) I | (23) C |
|---|---|---|---|---|---|---|
| Independent (I) or Chain (C), establishment | | | | | | |
| Percentage of population in urbanized area $_c$ | | | | | 0.076** (0.028) | 0.132 (0.119) |
| NHI for Race $_c$ | | | | | -0.113* (0.055) | 0.111 (0.258) |
| NHI for Age $_c$ | | | | | 1.334 (0.684) | -4.375 (2.809) |
| Deviation from CA median HHI $_c$ | | | | | 0.004** (0.001) | 0.009 (0.005) |
| Percentage of Cities established before 1920 $_c$ | 0.090** (0.030) | 0.128 (0.130) | | | 0.077 (0.045) | 0.094 (0.199) |
| Percentage of Cities established after 1956 $_c$ | | | -0.076* (0.037) | -0.024 (0.160) | 0.026 (0.056) | 0.025 (0.251) |
| Multicategory (yes=1) | 0.141** (0.037) | -0.112 (0.107) | 0.141** (0.037) | -0.11 (0.107) | 0.139** (0.037) | -0.111 (0.107) |
| Size of firm:Ln (establishments in firm) | | 0.122** (0.008) | | 0.122** (0.008) | | 0.122** (0.008) |
| Scale: Ln (employees at establishment) | -0.112** (0.010) | 0.299** (0.024) | -0.113** (0.010) | 0.299** (0.023) | -0.112** (0.010) | 0.298** (0.024) |
| Decay of influence of other CA counties | 0.000 (0.000) | 0.000 (0.000) | 0.000 (0.000) | 0.000 (0.000) | 0.000 (0.000) | 0.000 (0.000) |
| Lagged # new establishments/1000 $_c$ | 0.001 (0.003) | -0.008 (0.017) | 0.001 (0.003) | -0.009 (0.017) | 0.001 (0.003) | -0.01 (0.017) |
| Lagged # failed establishments/1000 $_c$ | -0.007 (0.005) | -0.002 (0.032) | -0.007 (0.005) | -0.002 (0.032) | -0.008 (0.005) | -0.006 (0.032) |
| Land Area/1000 $_c$ | -0.001 (0.001) | -0.008 (0.005) | -0.001 (0.001) | -0.008 (0.005) | 0.000 (0.001) | -0.002 (0.006) |
| Annual population change 1990-2000 $_c$ | -0.003 (0.006) | 0.052* (0.024) | -0.002 (0.006) | 0.049* (0.024) | 0.006 (0.006) | 0.047 (0.026) |
| Average retail wage 1997/1000 $_c$ | -11.877 (7.950) | -65.047 (36.854) | -14.603 (8.057) | -66.157 (37.592) | -0.314 (9.292) | -9.522 (43.927) |
| Personal income per capita/1000 $_c$ | 48.055** (17.126) | 156.762* (68.949) | 53.757** (17.629) | 154.524* (71.345) | 68.768** (23.836) | 244.175* (98.267) |
| Constant | 2.072** (0.115) | 2.171** (0.550) | 2.182** (0.114) | 2.280** (0.556) | 1.855** (0.526) | 1.211** (0.823) |
| | | | | | -0.178 | -0.823 |
| Gamma | .526 | .659 | .526 | .659 | .526 | .659 |

Notes: This table presents Loglogistic regression (accelerated failure-time form) of time to failure of retail establishments from a 15% random sample of the NETS California data, 1990-2004. For models of time to survival for independent establishments, N= 399,591, for chain establishments, N=58,264. Average relative increase in variance (over all coefficients) due to multiple imputations is zero in all models. Robust standard errors are reported in parentheses. The subscript C refers to calculations made at the county level. All models include fixed effects for year and a total population control variable, which I omitted to save space. Gamma parameter lower than one indicates that the loglogistic hazard increases and then decreases. * indicates p<.05, ** indicates p<.01.