



Retail Location

ÖZGE ÖNER



Jönköping International Business School
Jönköping University

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In the third paper, I investigate the spatial determinants of retail productivity. The focus of the paper is on the influence of market size and regional hierarchy on the productivity of independent retailers. The results show a higher productivity premium from the immediate market potential for stores located in central markets compared to stores located in non-central markets. On the other hand, regional market potential is found to play an equally important role for the productivity of stores located both in central and non-central markets. In the fourth paper, I address the role of retail as an urban amenity. In the empirical analysis, to capture the relevance of consumption possibilities for place attractiveness, "access to stores" measures are constructed for both the municipal and regional levels. Although consumption possibilities in the region are found to be positively associated with the place attractiveness of both rural and city municipalities, store access in municipal market boundaries is found to be relevant only for the place attractiveness of city municipalities.



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Özge Öner
Jönköping, 2014

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Abstract

The thesis in hand presents four individual chapters, all of which explore the spatial aspects of the retail sector. The theoretical framework used in all four papers is vastly rooted in the urban and regional economics literature. Using novel data from Sweden for the application of various econometric methods, the thesis investigates (i) the distance sensitivity of demand and market reach for various types of retail activities, (ii) the spatial composition of retail markets and co-location patterns between the various branches of the sector, (iii) the spatial determinants of independent retailers' productivity, and (iv) the relationship between the retail sector and place attractiveness.

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In the third paper, I investigate the spatial determinants of retail productivity. The focus of the paper is on the influence of market size and regional hierarchy on the productivity of independent retailers. The results show a higher productivity premium from the immediate market potential for stores located in central markets compared to stores located in non-central markets. On the other hand, regional market potential is found to play an equally important role for the productivity of stores located both in central and non-central markets. In the fourth paper, I address the role of retail as an urban amenity. In the empirical analysis, to capture the relevance of consumption possibilities for place attractiveness, "access to stores" measures are constructed for both the municipal and regional levels. Although consumption possibilities in the region are found to be positively associated with the place attractiveness of both rural and city municipalities, store access in municipal market boundaries is found to be relevant only for the place attractiveness of city municipalities.

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Introduction and summary of the thesis

I. Introduction

Inspired by a statement in Adam Smith's famous "*The Wealth of Nations*"¹ Napoleon once said "*L'Angleterre est une nation de boutiquiers.*", the direct translation of which is "*England is a nation of shopkeepers.*" Although it was initially perceived to be a disparaging comment on the British nation, he later claimed that he was merely stating the fact that British power is not derived from the extent of land or population but from the efforts of merchants and the scale of commerce².

The thesis in hand addresses the retail sector and in particular the various aspects of retail location. Retail, both as an economic activity and a sector, has attracted broad attention from within the social sciences, with each discipline focusing on a different aspect of retail trade. Logistics and supply chain studies are mainly focused on the distribution channels between the wholesalers and retailers. Business administration researchers have been interested in the in-store and product characteristics. Marketing specialists place emphasis on the ways products are placed in markets of various kinds. Sociologists have analyzed the consumption patterns of societies, while consumer psychology addressed the taste and consumption decisions of individuals. Although this thesis benefits from the research outcomes of these various disciplines, its roots lie vastly in the regional economics and retail geography literature. All four chapters of the thesis focus on the location of retail and tackle the importance of the spatial aspects of the sector.

"*Location, location, location*" has been the mantra for retailers (Fox et al., 2007). In fact, historically, the most important function of cities was the presence of a market place where the exchange of goods took place. In ancient Greece, the "*Agora*" was the square where the vendors would cluster to sell their goods to the largest audience. In Scandinavia, we see the emergence of cities like *Birka* during the 8th century, which for many years functioned as market places for

¹ "To found a great empire for the sole purpose of raising up a people of customers may at first sight appear a project fit only for a nation of shopkeepers. It is, however, a project altogether unfit for a nation of shopkeepers; but extremely fit for a nation whose government is influenced by shopkeepers." (*The Wealth of Nations*, Glasgow edition (1976, Book IV, section vii. c.))

² From the book of Albert Benhamou, "*Inside Longwood: Barry O'Meara's Clandestine Letters*" (Albert Benhamou Publishing, 2012).

the exchange of all sorts of goods from various parts of the world. As the civilization evolved, more systematic organization of the point of sale became evident. For example, the early footprints of organized retail centers can be traced back to the 15th century bazaars of the Eastern world and to the 18th and 19th century shopping terraces and arcades of the Western world.

The location of a store is probably the most important and most costly decision a retailer must make to accomplish long-term success. Almost all retailers prioritize the proximity to consumers when deciding on their location, which leads to co-location in the sector and thus retail agglomeration. Consequently, a highly competitive spatial market structure for the sector arises. From a wider angle, these agglomerations produce urban vitality, and the differences in the scales and diversity of retail markets define the competitive power of the hosting cities and regions. The positive attributes of the sector are not limited to the goods and services that are provided by the individual shops. Retailers also provide notable employment opportunities in the areas they are located. The presence of retail clusters in a city or a region bring about a wide range of complementing economic activities. In this respect, the function of the retail sector for the local and national economy is intricate and important.

This thesis positions itself in the urban and regional economics literature and mainly focuses on the location dynamics of the retail sector. In broad strokes, by employing novel data from Sweden for the application of various econometric methods, the individual papers of the thesis investigate (i) the distance sensitivity of demand and market reach for various types of retail activities, (ii) the spatial composition of retail markets and co-location patterns between the various branches of the sector, (iii) the spatial determinants of retailers' productivity, and (iv) the relationship between the retail sector and place attractiveness.

At the outset, it is worth establishing what retailing is in a brief definition. According to Berman and Evans (1998) "*Retailing consists of those business activities involved in the sale of goods and services to consumers for their personal, family, or household use. It is the final stage in the distribution process*" (p.3). Retail is the framework in which economic actors engage themselves in various transactions. The importance of the retail sector in an economy is undeniable. It is a complex and vital sector both in developed and in emerging economies, with a vast amount of production and employment opportunities (Krafft and Mantrala 2006).

In the 21st century, many countries have faced structural and sectoral changes in their retail sectors. Dawson (2006) describes several broad changes in Europe: (1) large firms have grown faster than the industry itself; (2) there has been a decrease in the number of small and micro firms; (3) management has become more strategic; (4) the organizational structures have become complex by default; (5) big retailers have started to coordinate their own value chains; (6) and big retailers have earned a stronger position compared to suppliers. Again, due to the growth of large firms and various acquisition activities, (7) there has been an increase in the market concentration.

Introduction and summary of the thesis

Additionally, we have seen (8) a rapid increase in the international activity of retailers. Despite various government interventions, especially in Europe, retailers have continually increased the foreign direct investments into retailing (Dawson 2006). Regarding the changes in American retailing, Weits and Whitefield (2006) emphasize the importance of cost reduction. They argue that, over the past two decades, retailers have focused on reducing their operating costs through (i) developing scale economies, (ii) increasing supply chain efficiency, (iii) operating big box stores and centralizing overhead functions, (iv) and beginning to adopt more analytical management techniques. For the rapidly emerging East Asian market, Larke (2006) reports that Japan accounts for more than half of the retail market size, and there are notable disparities between countries in terms of the scale of retailing. Regardless of this heterogeneity, most of the East Asian countries showed faster growth than the rest of the world over recent decades.

Despite the structural differences between the retail sectors of various countries, we see one very notable commonality: stores are not randomly distributed across space in any of these countries. Each place, within its unique spatial conditions, shows a clear regularity in the way retailers of various types are located in its market. In most of the countries, population is highly concentrated in space, with a significant share of the residents being clustered in or around city regions (Brueckner, 2011). The fundamental forces behind this spatial concentration is explained by economists with the aid of “*agglomeration economies*.” The existence of agglomerations (of firms and individuals) and the agglomerative (centripetal) forces can roughly be explained as the outcome of economic actors minimizing transport costs (see e.g., Fujita and Thisse, 2002). One type of agglomeration phenomenon we observe is the “*retail agglomeration*.” As will be further discussed, there are two main reasons for the emergence of retail agglomerations. First, consumers desire to reduce the cost of shopping trips by choosing retail clusters that provide them with multiple stores. These clusters provide consumers with a large variety of goods and stores, which implies the conveniences associated with comparison and multipurpose shopping³. Second, shops require a certain threshold of demand, under which they cannot generate profit or exist in the first place (Haynes and Fotheringham, 1984). Thus, retailers’ common motivation to be close to demand consequently leads them to be located close to each other (Cadwallader, 1996). This tendency of retailers to agglomerate or be located close to the center of markets has varying magnitudes depending on the type of retailing or type of geography in question. Nevertheless, regularities are evident in the way the retail sector is distributed in space in almost all the countries we observe.

³ *Comparison shopping* is the act of comparing the price of goods or services of a similar kind provided by various shops before making a purchase, and *multipurpose shopping* is the act of purchasing goods and services of various kinds on one shopping occasion.

Following this, a list of intriguing questions arises regarding the spatial composition of the retail sector. What kind of spatial patterns do we observe in the sector as a whole? What are the spatial characteristics of a marketplace that determine the presence and the scale of the retail sector? What type of systematic variations do we observe across various markets and across various types of retailing activities? What is the implication of the presence of shops for the attractiveness of the hosting market? These and other questions constitute the focus of the thesis in hand.

Caddaweller (1996) states *“The two of the spatial distributions most closely associated with that of land values are the patterns of retailing and population density”* (p.101). This is why it is not surprising to see the great attention paid to urban retail design and the development of the retail sector from various actors such as the real estate industry, urban planners, shopping center owners, independent retailers, and municipal and national authorities. Despite their common interest, they have substantial differences in their views on how to best implement new retail development or foster the existing retail (Gibbs, 2011). This thesis not only aims to contribute to the existing literature on retail location but also intends to enhance the understanding of the spatial dimension of the retail sector for all the parties involved in the decision making process in the retail sector.

2. Retail location: demand, clustering and competition

One of the most notable characteristics of the retail sector is that it is highly location sensitive. Due to the nature of the economic activities carried out in retail establishments, they are likely to be found in or close to regional centers. The transactions within the retail sector often require face-to-face interactions between buyers and sellers. In most cases, consumption and production of retail services take place in very close proximity.

The roadmap for the theoretical development of retail location theories is rooted in various fields of social science from marketing geography to economic geography, which are related to each other in essence but are distinct in their axioms. This section briefly visits some of these theoretical frameworks that directly relate to retail location, which are also extensively used in the individual chapters of the thesis.

2.1. *Central place systems*

One of the most influential theoretical bases for understanding the distribution of retailing activities across space is provided by the traditional location theories. For example, the use of “Central Place Theory,” which is based on the tradition of von Thünen (1826), Christaller (1933) and Lösch (1940), to understand the spatial organization of retailing is immense. At a theoretical level, assumptions are that the city is monocentric in some way and that the land is a plane. Nevertheless, the way the theory provides us with an understanding of the movement of consumers in a city is still useful for the real world examples where not all cities are monocentric. The departure point of the idea behind the central place theory is the identification of a “central place” based on the intensity of transactions that take place between individual consumers and entities that provide goods and services to these individual consumers and households. According to the empirical regularities, the economic activities that are clustered in the urban core are likely to depend on the intensity of interaction between buyers and sellers, which imply that the central markets are mostly allocated to retailing, leisure services, business services and the like. However, activities like manufacturing and wholesaling are located in the peripheral rings. The theoretical foundation provided by the traditional location theories is widely acknowledged and further developed by new streams of literature like (New) Urban Economics, where the agglomeration economies and location choices of firms and individuals are explained as a function of transportation costs (Alonso, 1964; Fujita, 1988; Krugman, 1991) and the micro-foundation for urban spatial structures are studied in depth (Alonso, 1960; 1964; Muth, 1961; 1969; Mills, 1967).

The relevance of the central place theory for retail can be traced back in the history of many countries, especially countries like Sweden, the Netherlands and the UK that have strong retail planning traditions (Dawson, 1980; Borchert, 1988; Sparks and Dawson, 1989). In each location, it is possible to describe a spatial dimension of consumer demand. The demand at any location can be expressed (roughly) as the number of consumers within a large area multiplied by the volume of sales in that area. Based on this basic idea of spatial demand, it is possible to map a retail center by taking the surrounding geography into account. Within this boundary, demand is not uniform but is subject to distance decay. In other words, demand is expected to decline with increasing distances because consumers will need to travel to access the center. Lösch (1940) referred to this as a spatial demand cone, and Huff (1964) emphasized that decreasing shopping probabilities radiate outward from a center.

Berry (1967) follows the earlier work of Christaller and Lösch and suggests that the Central Place Theory can be used to explain the configuration and emergence of trading areas. Combining microeconomic theory with spatial analysis, he assumes a flat plane with a uniformly distributed population and equal travel accessibility in all directions and suggests that a market center is likely to develop as the suppliers enter the market. Following the emergence of these central market places, consumers would evaluate the price of a good together with the transportation cost to get to this center. The idea is that if the price of the good together with the additional transportation cost is not sufficiently low, consumers would patronize a closer market place. In this strand of literature, the range within which the demand is large enough to secure the presence and profitability of a retailer is termed the “threshold range” (Parr and Denike, 1970). Haynes and Fotheringham (1984) refer to this minimum threshold as the “hurdle level,” which implies the minimum number of customers required for a service to at least break even.

Central-place theory suggests that cities are connected in a system of cities and hierarchically ranked (rank-size) structure. Larger cities are likely to be linked closely to cities of smaller size and are also likely to influence the growth of the smaller cities connected to them. We expect the number of services available in a central-city to increase as its rank increases (Dicken and Lloyd 1990). This type of hierarchical order for cities is also found in retail markets. For instance, Berry and Garrison (1958a, 1958b) suggest that a similar stratification exists in the retail markets because small clusters of retail establishments along the street are followed by neighborhood shopping centers, community shopping centers and, to a larger extent, regional shopping centers. By dividing the trading areas into a separate hierarchical circle of demand, Applebaum et al. (1974) distinguishes between a primary area where there is the highest demand, a secondary area where demand is lower, and a peripheral ring where consumers have the tendency to shop elsewhere.

The identification of a distance-demand relationship for retail starts with tracing the location origin of the patrons and the residential areas for a given square meter grid. A measure for sales is calculated by multiplying the number of residents by the average income for each square. Market penetration can then be determined by measuring the proportion of people who live within the square and shop at the store. A trading area boundary can then be determined by *“the points in distant residential areas at which the sales of the firm approach zero”* (Brown, 1978).

2.2. Bid rent theory

Another retail relevant approach is Haig's bid rent theory (1927), which mostly tackles the within-city distribution of population and economic activities. It argues that the land is occupied by those entities that can pay the highest rent value, and therefore, the land is in its “highest and best” use (Fujita et al. 1988). In line with these presumptions, many scholars investigated why the city center is allocated to certain economic activities, including retail. Alonso (1960, 1964) has noted the stratification of a city between retail and industrial activities because retailing often takes place in the center and industrial activities take place at the periphery. Building on Alonso's work, Ratcliff (1949) conducted a more precise analysis by suggesting that the type of retailing activity explains its spatial distribution within a district. In other words, retail establishments such as department stores were likely to be found in the city center, but low-order activities were located on the outskirts. (Brown, 2006)

According to the bid rent theory, the desire of the retailers to attract more and higher profile demand encourages them to seek higher rents. Here, the amount of rent a retailer would pay for the land drops rapidly as the distance from the central market place increases (Johnston, 1973). Scott (1970) argues that the spatial organization of retail activities within shopping districts can be explained by bid rent theory. In the cluster of retail services within the urban core, competition is highest, and the ability to pay higher rent is considered to be a good indicator of performance and competitiveness.

The arguments raised against the bid rent theory can be described in two lines. Urban economists argue that the relationship between institutions and the property market within an urban area is not always indicative of a straightforward “best economic use of space” (McNamara, 1979). Other critics base their opposition in a somewhat *“historical accident”* idea that suggests that urban space is influenced by the past. This implies that the concentration in the urban core may be a reflection of a regular urban growth that radiates from a predefined central market place to newly emerged peripheries (Colenutt and Hamnett, 1982).

2.3. Retail gravitation

Another line of literature widely used in explaining the spatial organization of retailers came into existence following Reilly's analogy between Newton's law of motion and retail location, which later became a milestones in retail research. Reilly mentions that *"two cities draw trade from any intermediate town (or city) approximately in direct proportion to the populations of the two cities and in inverse proportion to the square of the distances from these two cities to the intermediate town"* (Reilly, 1931, pg.9).

Estimating the relevant market boundary for a retailer has been the focus of many researchers from various disciplines. Reilly's role in this trend is immense, where his theory (proposed in less than 100 pages) inspired many alterations to studies where the goal has been mostly identifying retail trade areas, estimating retail market-share, or conducting sales forecasting and performance measurements for retailers (Fotheringham et al., 1989; Ghosh and McLafferty, 1987). Although it was later found to be crude for practical applications, Reilly's law is intuitive in the way it generalizes what matters for the identification of the relevant market for a retailer. One interesting aspect of the theory is that, despite it being widely used by the marketing researchers, its obvious relationship to the traditional location theories (e.g., central place theory) is often neglected in retail research. What Reilly did initially was take a basic gravitational approach to explain why and how the consumer decides between various shopping centers to patronize. According to Tocalis (1978), Lösch (1954) is actually one of the first researchers to put the discussion in a mathematical framework based on the traditional location theories. The law's virtue is also its obstacle because the formulation of a Reilly type gravitational model is easy to apply but only when one has accurate data on consumers' travelling patterns. Consequently, its crude nature has come under criticism by previous research (Kivell and Shaw, 1980; McGoldrick, 1990). Another critical point for the way the gravitational approach operates has been the fact that there was no decomposition of retailing activities, which means that the systematic differences between various types of retailing activities have been neglected (Brown, 1992; Mayo et al., 1988).

Another limitation with the early versions of gravitational approaches is that only two retail markets were in question. Although Reilly has previously mentioned the issues in relation to overlapping market areas, it was primarily Huff (1964) who stylized a model where more than two retail markets are taken into account. Taking consumer behavior into account, Huff followed the basic idea that consumers choose between retail markets based on two attributes of a center that are antipodal: size being the positive one and traveling time to the center being the negative one.

2.4. Multipurpose shopping and retail agglomeration

Central Place theory is based not only on the assumptions of identical consumers and even distribution of population but also on the premise that consumers envisage the cost of travel to a retail center for single purpose shopping. Despite the fact that both Christaller and Lösch acknowledged the possibility of a multipurpose shopping trip, they did not modify their model accordingly. However, previous empirical research has shown that shoppers do not always patronize the nearest center where they can find a particular good or service (Golledge et al., 1966). It is found that most customers will travel to a range of locations, depending on the good or service they are looking for. (O'Kelly, 1983; Thill and Thomas, 1987).

For example, the underlying logic behind the central place systems is that a store benefits from locating as far from its competitors as possible so it can dominate its very own market area. Parr and Denike (1970) argue that the reason we do not see stores attempt to avoid each other is vastly attributed to the benefits from agglomeration. Consumers often do not make a shopping trip for the purchase of one good only.

For a consumer, a multipurpose shopping trip is preferable to a single-purpose shopping trip because it reduces the cost of time and travel. The multipurpose trip also allows customers to patronize distant and larger marketplaces with more variety (Johnston and Rimmer, 1967; Craig, Ghosh and McLafferty, 1984). Multipurpose shopping is an important concept in the retail literature because it provides for an understanding of why a hierarchy exists between various retail centers. The clustering of similar types of retail stores (such as outlets) and planned or unplanned retail clusters and their survival can also be partially explained by the multipurpose shopping behavior (Ghosh, 1986; Ghosh et al., 1987).

Parr and Denike (1970) argues that, even when multipurpose shopping trips do not occur, producers (retailers) might still prefer to be located centrally and close to each other to inhibit the effect of distance on demand. For instance, an empirical study by Artle (1959), where he investigates the six retail activities for the Stockholm metropolitan region, highlights the importance of proximity between the suppliers and purchasers. It is also noteworthy that differences in the degrees of these retail clusters are observed regarding the type of a specific retail activity⁴ (Kivell et al., 1980).

From another angle, Hotelling (1929) tackles retail agglomeration with an approach that is mostly rooted in the idea of "*the principle of minimum differentiation.*" The idea is that firms that sell similar products tend to cluster in the center of a given market to benefit from the scale of that market (Hotelling, 1929). Assuming that consumers receive the same good along a straight line in a market with two suppliers and that demand is dependent on only the price

⁴ High-order retail activities have the tendency to cluster more than the low-order retail activities. (Brown, 2006)

and transportation costs and is inelastic, Hotelling (1929) suggests that consumers would prefer the seller with the lowest per-unit cost. The idea is that the suppliers would locate in the middle of the market place, regardless of the fact that they can optimize by being located at the quartiles. In the end, each of the suppliers would dominate one half of a given market place.

Despite its recognition, several studies that raise arguments against the propositions of Hotelling can be found. For example, a study by Eaton and Lipsey (1975) argues that the principle of local clustering suggests a strong tendency for new firms or relocating firms to be located close to the existing ones, where the principle of minimum differentiation is only a special case of local clustering in which the number of firms in the market is restricted to two. Huff (1962) suggests that consumers are not always certain about the benefits attached to various types of retail suppliers. Devletoglou (1965) argues in the same fashion as Huff (1962) and proposes that it is not always straightforward for a consumer to define what type of utility he/she can derive from a given retail point, and so it is likely that the choice of various suppliers is made randomly. Devletoglou (1965) critiques the distribution of demand and suppliers along a line and suggests a two-dimensional plane where the suppliers move along the central axis instead. He suggests a trading area that is bordered by the curves of two hyperbola with a region in the center. This is a way of saying that the central region will be relatively smaller for those locations that lie at the edges of the market place because the hyperbola turns into an almost straight line. As expected, the proposition is based on the assumption of a duopoly in the market, where the equilibrium solution cannot be determined in the same way as with the existence of a third or more suppliers. This occurs because the central region expands to fill the marketplace. Fetter (1924) also proposes a hyperbolic relationship and studies the “*competition between two centers to attract consumers from the area between them.*” Given hyperbolic curves for two spatially distinct market areas dominated by two suppliers, he suggests that the boundaries will be based on the supplier’s relative price. In other words, the spatial gap between the two suppliers will increase as the relative price decreases.

2.5. *Spatial interaction and competing destinations*

Although central place theory suggests that distance is the fundamental factor behind the demand for retail markets, the modern consumer is able to travel beyond their local municipality to patronize retail markets. Despite the highly distance-sensitive propositions of the central place theory, spatial interaction theory suggests that the attractiveness and the surrounding environment of the location of the retail clusters might play an even more important role (Haynes and Fotheringham, 1984; Fotheringham and O’Kelly, 1989; Reilly, 1929, 1931). Suggesting overlapping trade areas rather than a single point, Luce (1959)

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argues that consumer choice is based on the relative utility and not simply market size.

Central place theory proposes a consumer tendency to patronize the markets that are centrally located and easy to access. However, the spatial interaction theory suggests that the attractiveness of another retail location can offset the motivation for a consumer to reduce transportation cost by choosing the closest retail market place (Dawson, 1980). Both the technical applications and the theoretical framework within spatial interaction theory have been criticized by numerous scholars. Primarily, these are criticized for assuming a closed system with an evenly distributed population across predefined residential areas. Scholars suggest that the spatial distribution of the population in a selected area is uneven (Roberts, 1971) and that its size and shape can have a substantial impact on the output driven by the models (Batty and Sammons, 1978). At a theoretical level, the main criticism is that the concept is static and lacks dynamism. It neglects changes that can be observed in the consumption patterns, spatial relationships, and other regional parameters that compromise its applicability in the longer term (Thorpe, 1975; Beaumont, 1988).

Most of the criticism of spatial interaction theory concerns the use of traditional gravity models. Haynes and Fotheringham (1984) criticize the use of gravity models for defining retail service areas by highlight the importance of “competing destinations.” In broad strokes, the spatial interaction between locations is mainly determined by the spatial structure itself. This is an interesting question raised by a series of research during the 1970s that tackles what is actually contained in the spatial structure that is not included in the gravity model formulations (Curry, 1972; Johnston, 1973; Fotheringham and Weber, 1980). Fotheringham (1983a, 1983b, 1984) suggests that the “missing variable” in these gravity models is the consideration of competing destinations and intervening opportunities (Haynes and Fotheringham, 1984).

3. Consumption and retail space

3.1. Changing consumption patterns

Countries, especially those with advanced economies, have seen a significant shift in the value and consequently in the concept of *shopping* over time. Central postmodern theory proposes that the symbolic meaning of products has become more important for the consumer than their material utility (Baudrillard, 1981). In the 1950s, researchers were fixated on the changing nature of products and consumption. Levy noted that people buy products for not only what they do but also for what they mean (Levy, 1963). As the influence of the symbolic meaning⁵ of products grew in the late twentieth century, the meaning of consumption transformed as well. Contemporary social theorists have proposed that consumption plays an important role in how the entire social world is constructed (Campbell, 1991; Featherstone, 1991).

Over a hundred years ago, Veblen's "*Theory of the Leisure Class*" (1899) introduced the concept of "*conspicuous consumption*." He argued that someone's position in the social hierarchy, their status, and honor are mostly related to the amount of property they have. The core assumption that lies behind the theory is that economic life is driven by social vestiges rather than utilitarian purposes (Veblen 1973 [1899]). The theory of conspicuous consumption was challenged by mainstream economics in the late 1980s. Veblen's theory was argued to be too simplistic to root the entire social dynamic in the consumption patterns of those who are situated at the top of the hierarchy (Lears, 1993). In fact, it is argued that the way consumers display their wealth has transformed over the years to be more nuanced and subtle (Canterbury 1998). Another counter-argument is that the social class no longer shapes consumer behavior. Instead, lifestyles took over the social hierarchy in terms of shaping consumption patterns (Featherstone, 1991; McIntyre, 1992).

The discussion in the 1950s of symbolic value was immediately followed by the 1960s' notion that consumer choice and lifestyle were joined. The hedonic consumption concept, as it came to be described in the literature, started to be investigated more accurately during the early 1980s (Levy, 1980; Hirschman, 1980). Hirschman and Holbrook (1982) emphasized that multisensory images, fantasies and emotional arousals became important in explaining consumption⁶.

The transition in the economic system over the last two centuries directly relates to the discussion of the changing consumption patterns. The agrarian economy, where raw commodities were circulated, was rapidly replaced by the

⁵ Symbolic meaning refers to the perceived image of a specific product. In previous literature, the symbolic meaning of products has taken into account as a sign of commodity (Baudrillard, J., 1981). For a Critique of the Political Economy of the Sign. St Louis, MO: Telos.

⁶ Throughout the years this thesis was written, several songs used the term "to pop tags", which in broad sense means going shopping and purchasing many items.

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new industrialized world, where everything was packed and placed on store shelves. Following industrialization, the ascent of the service economy brought about an additional value that was generated in the process of distributing a good. Today's economy, on the other hand, can be referred to as the "*experience economy*," where more value than ever is derived from the experience⁷ of consuming a product compared to the actual value of the commodity (Pine and Gilmore, 1999). Andersson and Andersson (2006) argue that Sweden is one of the OECD countries that experienced a drastic increase in its average leisure time (paralleled by the dramatic decline in annual working hours) between 1870 and 1979. For example, historical data show an increase in the share of disposable income allocated to the consumption of arts, entertainment, and leisure. The importance of this increase in leisure expenditures to the entire retail sector is undeniable. For example, Krafft and Mantrala (2006) stress that changing consumer needs and increasing interest in the shopping experience has altered the retailing landscape in the 21st century.

The experience element being embedded in shopping and consumption in general implies that the presence of retail services in an urban area can also be perceived as an attraction factor. Glaeser et al. (2001) argued that cities attract people by being a hub not only for production but also for consumption. It is also reasonable to assume that those with high income profiles who are engaged in certain types of occupations would prefer diverse consumption possibilities. For example, according to the statistics from Sveskhandelhandel⁸, shopping-tourism has increased by 204 percent since 1995.

For the transformation of consumption in Sweden, Forsberg (1998) claims that there are two very important events that shaped today's Swedish consumption patterns. First, the increased use of cars has allowed individual mobility in Sweden like it did in many other countries. The increased use of cars brought easy access to the retail clusters located outside of the city core. From the 1960s, it is suggested that the conveniences provided by this increased access motivated the alternation of the spatial layout of many shops (especially food retailing). The second point raised is the participation of women in the workforce, which directly relates to the increased purchasing power in the household. As an additional underlying factor to the changes in consumption habits, Forsberg (1998) also argues that the drastically increased housing standards and single-person households between 1960 and 1990 altered the way the retail sector functions in Sweden.

⁷ Although earlier definitions of 'experience' mostly regarded artistic or cultural products, today, experience is part of the value of almost every product or service.

⁸ Svensk Handel, <http://www.svenskhandel.se/Fakta--rapporter/Rapporter/Shoppingturism/>

3.2. Shopping vs. purchasing

In the consumer behavior literature, shopping is often defined as a learning process during which a consumer obtains information on a certain product or a bundle of products. Here, purchasing is merely the final stage of a larger process (Brown, 1978). There is a difference between shopping and purchasing for every bundle of goods. However, the proportion of shopping devoted to actual purchasing varies from everyday goods like groceries and durables (like furniture and technological devices).

The size of a retail center affects a consumer's experience and their ability to enjoy a full shopping experience. However, if a consumer has decided on the type of good he/she will purchase by the end of the shopping process, the size of the center is important only up to a certain point. In that scenario, as soon as a customer has a large enough variety for a specific bundle of goods, additional size will not matter. This argument can be extended to identify the difference between "*within-store*" and "*between store*" shopping. Again, if a consumer has the intention of buying a specific type of good and a given store provides enough variety, he/she would go for a within-store shopping experience. The only time the consumer might prefer a between-store shopping experience is when stores selling similar goods are clustered together, which creates a convenient shopping experience. To some extent, this explains why it is common to see clusters of outlets selling similar items close to each other.

It is more difficult to investigate shopping in general than purchasing in particular. In the same way, the actual cost of shopping is hard to measure, but purchasing costs are easy to capture. Purchasing data are sufficient for scholars to conduct market analysis with aggregate information (Bucklin, 1971; Huff, 1964). The survival of retail spaces is highly dependent on customer loyalty and sustained attraction. Even when a customer is not engaged in purchasing on each shopping visit, it is still important for retailers to promote customer circulation. Following this basic logic, it is reasonable to assume that any investigation conducted using pure purchasing data will have difficulties reflecting the precise success or survival of a retail center because it will not reflect any substitution effect. Over a longer time horizon, it is difficult to identify retail success with pure purchasing information. Because of this, if not provided by consumer behavior data, the spatial organization of stores should signal the trends for the sector and market penetration in a more robust way.

The following table was constructed by Brown (1978), and it summarizes the various costs associated with shopping and purchasing by various studies. Primary costs or commodity costs, in other words, are listed as the actual monetary price paid to obtain goods and services, but the secondary costs can be listed as a monetary or non-monetary cost. Some of the monetary costs are listed as transport costs, parking fees, installation charges, and sales taxes. On the other hand, non-monetary costs consist of time costs, the physical energy required to conduct the shopping, and a set of psychological costs. These costs

directly relate the spatial structure of the sector and consumers' choice to patronize a store.

Table I. The costs of Shopping and Purchasing

Prime Costs (Commodity Costs)	The monetary price paid to obtain goods and services
Secondary Costs	All the costs, both monetary and nonmonetary, exclusive of the price directly paid for the target commodity or service.
1. Monetary Costs a. transport costs b. parking fees c. installation charges d. sales taxes e. income foregone	2. Non-monetary Costs a. time costs .travel time .waiting time .search time b. physical energy expended c. psychological costs .inner conflict, frustration, depression, anxiety, tension, annoyance

Source: Brown, 1978

3.3. Online vs. offline shopping

Although we observe a slowing pattern in the penetration of regular Internet users, the number of consumers who use the Internet to shop for consumer goods and services is growing significantly. Research shows a notable increase in the number of online shoppers in the key European markets, and Sweden is one of these markets. In a survey study of electronic commerce and electronic invoicing in Swedish municipalities and county councils, it was found that the share of electronic commerce in the purchase of consumer goods has been increasing since 2006. The advantages of electronic commerce were found to be an increased awareness of pricing, better control of purchasing, improved loyalty to agreements and a faster ordering process (Sveriges Kommuner och Landsting, 2013).

Sales growth for Swedish e-commerce is approximately 15 percent according to the figures from 2012, and the Swedish consumers today consider e-commerce to be a secure and convenient option. Previous research argues that consumers who trust an online company feel more committed to that company (Amoroso & Mukahi, 2013). Companies have solved most of their logistical obstacles and developed several business models to meet the needs of consumers. Technological developments have also simplified the online shopping experience with the increasing use of smartphones and tablets. Today, online retailing consumers can enjoy several conveniences. They have “access” convenience where the shopping is free from the constraints of time and space. Thanks to online retailing, the desired product can now be found effortlessly, and online payment methods increasingly provide consumers with flexible and easy purchasing options (Jiang, Yang & Jun, 2013). Overall, e-commerce has entered a new growth phase in which both consumers and businesses have matured (HUI Research, 2013). It is not only the number of consumers but also the volume of purchases that exhibits an increasing pattern. We know that,

in many countries, the amount of purchases has grown over-proportionately with respect to the number of internet users.

Meanwhile, the physical retail space displayed drastic changes over the past decades. Despite the increase in online retailing, the retail markets are still dominated by offline stores. However, the changing consumption patterns have reflected themselves in the use of physical space for retailing. The increased mobility of individuals, the participation of big investors, and policy driven planning processes triggered the tension between downtown and out-of-town retailing and between small individual shops and chain stores. Through the use of online channels, physical chain stores gained an even higher advantage over the small individual stores, where the physical stores started serving as showrooms and the consumers could enjoy the online price and product comparison. However, the effect of online retailing on the overall industry is perhaps overrated. Recent statistics from the U.S show that, although e-commerce nearly doubled between 2004 and 2013, today, it corresponds to only approximately 6 percent of the overall retail trade⁹.

There are certain elements of physical stores that possibly cannot be substituted by online retailing. The distinction between shopping and purchasing, as discussed previously, is one of the determiners of consumers' ongoing preference for physical stores over the online alternatives. Retail patronage and particularly the behavior of consumers is highly dependent on retail store characteristics as much as on location. Although the thesis in hand focuses on the spatial attributes of the sector, the behavioral attributes of consumers regarding what is offered by physical stores is worth touching on. The following table was prepared by Brown (1978) and exhibits the positive attributes of retail stores.

Table 2. Positive Attributes of Retail Stores

Merchandise Characteristics Fashion Assortment Brand Names House Brands Clear marking Stock on hand	Physical Plant Characteristics Convenient layout Cleanliness Restaurant Facilities Décor Merchandise Displays Ease of check out Parking In-store mobility	Employee Characteristics Number Courteous Friendly Helpful Knowledge
Service Characteristics Returns and Exchanges Credit Delivery Gift consulting Lay away Phone orders Hours		Characteristics of Other Shoppers Friends Social Class Life Style

Source: Brown, 2007

The essential argument here is that a store's probability of being patronized by consumers increases as the number of positive attributes grows. It is

⁹<http://www.theatlantic.com/business/archive/2013/12/the-end-of-retail-is-overrated/282161/>

important to mention that the importance of these attraction characteristics varies with the demographic characteristics (Feldman and Star, 1968), and social class (Lazer and Wykham, 1969) of the consumer. Retail spaces and retail centers in particular differ substantially depending on their geographical location. Looking at the structural and operational differences in the retail sector across the globe, it is reasonable to expect that attraction characteristics vary by country. Cultural attributes of the location may impact the relative ranking of each characteristic. Nevertheless, the growing internationalization of the retail sector (Dawson, 2006) might suggest a convergence in retail operations and store characteristics.

3.4. Retail and spatial planning

Starting from the 1960s, out-of-town retailing became a big phenomenon in almost every country. The uniform architecture of the new retail centers provided many advantages to both suppliers and consumers. In the beginning, peripheral retailers were not perceived to be substitutes for the central retail clusters because most peripheral warehouses emerged due to the need for bigger establishments for durable household goods (Guy, 1998). In most Western European countries, including Scandinavia, during the 1960s and 1970s, governments developed private incentives to encourage peripheral retailing. The goal of planners was to provide a large enough retail space for newly emerging neighborhoods due to urban sprawl (Dawson, 1983).

Today, authorities have extended the arm of retail planning to town centers. Over time, peripheral retailers began to be seen as substitutes for central retail districts. The diffusion of private transportation, the decrease in time distances and the learning process of consumers all encouraged the popularity of out-of-town retailing. Additional advantages such as bigger scale, more diversity, free parking, security and convenience made regional malls even more appealing. Looking at the historical data, we see a substantial increase in the rent prices, and we know that the retail sector is still dominated by small shops in Europe (Birkin et al., 2002). However, local authorities are now more concerned than ever with making the city core attractive for shoppers. Inner city shopping center development emerged as an alternative to the mall, especially in Central Europe. According to the data provided by Birkin et al. (2002) on shopping center openings between 1998 and 2000, the share of shopping centers in the town center has grown considerably.

Regarding the interaction between the retail sector and urban space, a more recent study by Fernandes and Chamusca (2014) argues that the drastic changes that reshaped the retail landscape over recent decades necessitated collaboration between private and public actors more than ever. This conciliation between the public and private actors brought about a diverse range of planning policies that targeted the consequences of specific changes in the trade methods and spatial layout of the sector (Fernandes and Chamusca,

2014; Brown and Dant, 2009). Despite the degree of pressure on downtown retailing imposed from the external retail centers, Wrigley and Dolega (2011) show that the resilience of the city center and high street allowed the retailers located there to compete and even outperform their counterparts located outside of the city core. A similar argument can be built for the Swedish retail landscape, where we observe a rapid recovery of the attractiveness of city center from the 1990s onwards (Rämme and Rosén, 2009).

For the Swedish case, the tension between downtown retailing and out-of-town retailing has been no exception. In fact, retail decentralization was initially orchestrated and supported by policies to maintain or increase the demand at a given municipality (Forsberg, 1995). Unlike countries like Denmark, Germany, Belgium, and England, Sweden does not have a national policy for the development of retail centers (Kärrholm and Nylund, (2011). Instead, the location and planning of retail is regulated individually by the authority in a given municipality. However, each municipality is obliged to follow the national 'Planning and Building Act', which dictates the physical and spatial planning of the use of land, water, and the built environment (Waxell, 2014). This implies that what seems like an autonomy on the local level does not reflect in the physical layout of various retail markets to a great extent.

3.5. *Employment in the retail sector*

Retail is a highly labor-intensive sector, and labor for a retailer corresponds to a significant share of the overall cost (Wrigley and Lowe, 2002). Providing retail service requires face-to-face interactions. Retailers also need service support to increase sales volume, and the cost of labor represents a significant share of the overall costs, which need to be low enough for survival.

The segmented nature of labor markets has been discussed in previous studies (Ashton and Snug, 1992; Ashton et al., 1982; Atkinson, 1985; Peck, 1989). What the literature refers to as *primary employment conditions* cover secure terms of employment with relatively high wages and good working conditions. The *secondary* form corresponds to a form of employment where there is little security, low wages and no long-term contracts. This type of stratification in employment is obvious in the retail sector in almost every country in the world where unions do not manipulate the wage levels. Sweden is one of the unionized nations.

Freathy and Sparks (1995) argue that the labor force in retail is becoming even more polarized. Many retail outlets contain a core of full-time staff with a small number of part-time staff brought in and out based on the current demand. The human capital employees obtain in the managerial tasks is not even a subject for comparison in regard to lower degree tasks.

Table 3 displays the age distribution in Swedish retail employment. The majority of 16-19-year-old workers are likely to be employed part-time in the sector. One can observe that the Swedish retail sector is very young in terms of

the age distribution of labor. Approximately 70 percent of all employees are 16-44 years of age.

Table 3. Number of people employed in Swedish retail sector by age, 2011

Age category	2011	Percentage
16-19	15 989	6%
20-24	53 903	20%
25-34	69 261	25%
35-44	54 943	20%
45-54	42 806	16%
55-59	16 484	6%
60-64	14 756	5%
65+	6 417	2%
Total	274 559	100%

Source: (HUI, Snabbfakta)

In regard to the education level of the labor in Sweden, majority of the retail employees have a high school education according to data from 2011 (approximately 60 percent). This is followed by employees with higher education (approximately 20 percent). In Sweden, only a small share of the employees have less than a high school education.

Part-time work is a phenomena in retail sector almost in every country in the world. In majority of these countries, individual firms determine wages endogenously (constrained by a minimum wage set by law). Regarding the wage structure in Swedish retail sector, the situation with the wage structure is considerably different. Although minimum wages in Sweden are not regulated by law, the collective agreements between Commercial Employees' Union (Handelsanställdas förbund) and the Swedish Trade Federation (Svensk Handel) determines the minimum wages for the Swedish retail sector. These collective agreements concern not only the full-time workers, but also the part-time workers. Additionally, the wage schedule varies with respect to several factors (age, occupation, and experience) (Skedinger, 2011).

4. Retail in Sweden

Swedish retail trade is as old as the early examples like Birka (8th century), which is one of the earliest urban settlements in Scandinavia. Places like Birka¹⁰ functioned primarily as the retail center of gravity, where goods from all around the world and parts of Scandinavia were traded¹¹. It was not until the 19th century that Swedish retail trade exhibited a significant structural change (Nordin, 2009), and before this, the rural layout for retail was pretty much the same as it is in towns (Kärrholm and Nylund, 2011). The amount of employment in Swedish retail corresponded to approximately 0.5 percent of the total population and was rather steady until the late 19th century, but we see an incredible increase in this percentage by the end of 20th century (Kärrholm and Nylund, 2011). Today, almost 20 percent of the total Swedish population is employed in the retail sector, and the sector accounts for approximately 15 percent of Sweden's GDP. Approximately three percent of Swedish GDP consists of value added from the retail sector only, and together with wholesale, this percentage reaches up to eight percent (HUI Research, Stockholm).



Figure 1. Retail sales, trade volume, 1956-2013 (data up to and including 2013). Index 1995=100. Source: Statistics Sweden¹²

¹⁰ It is believed that the Latinized name for the city is derived from an Old Norse word 'birka', which translates as "market place."

¹¹<http://www.handelnshistoria.se/historien/handelns-geografi/birka/>

¹²http://www.scb.se/en_/Finding-statistics/Statistics-by-subject-area/Trade-in-goods-and-services/Domestic-trade/Turnover-in-the-service-sector-/Aktuell-Pong/6636/Retail-Trade/30451/

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Looking at the changes in retail sales in terms of volume between 1956 and 2013 (displayed in Figure 1), we see the increasing trend from the 1950s on, which previous research has attributed to the welfare state (Albertsen and Diken, 2004; Kärholm and Nylund, 2011). However, the actual take-off can be observed around the mid-1990s, which corresponds to the era in which the markets were liberalized due to several de-regulations. Wrigley and Lowe (2002) argues that a wave of de-regulations following the 1980s affected the retail sector's expansion globally.

Sweden was one of the leading consumer markets in Europe in the 1960s. Companies used Sweden as a test market for their new products and services. Up until the economic turbulence in the 1990s and despite short periods of stagnation, the overall trend for the retail market displayed growth. The rapid increase in the participation of women in the labor force was reflected in the consumption patterns. The country as a whole experienced a significant decline in household size, where the share of single-households increased from 25 percent to 40 percent between 1970 and 1994. Consequently, newly emerging neighborhoods brought about the necessity of retail development, most of which was incentivized during the 1960s and the 1970s by the government¹³.

According to figures from 2012, Sweden is one of the top countries in terms of both retail space per capita and retail productivity¹⁴. Changing norms and attitudes about consumption reshaped the entire retail sector over the past few decades, where the share of the household budget reserved for consumption increased steadily. One of the advantages of studying the Swedish market is the low levels of disparities in the income levels across occupations and households of various types, but most importantly across cities. Sweden's unique spatial organization provides convenience for studying the location aspect of the retail industry, i.e., the importance of demand inflow to a market in a robust way. Almost every municipality and region in Sweden is monocentric, with one central municipality surrounded by smaller peripheral municipalities. Swedish data on individual and establishment level are rich, geographically disaggregated, and available for a long period of time, which opens doors for testing the propositions of previous theories and revealing in-depth information regarding the location dynamics of the sector.

The retail sector's responsiveness to the changes in the overall economy is known to be higher than for most other industries. Any significant change in the economy reflects itself in the price levels and the composition of household expenditures, which almost immediately changes the performance of the actors involved in retail trade. When there is an economic downturn, we see the outcome of the market changes in a very notable way in the retail sector. For example, between 2008 and 2009, according to the seasonally adjusted changes in the volume of retail sales in the OECD countries, many countries had

¹³See Forsberg (1998) for a detailed discussion on the transformation of consumer habits and retail changes in Sweden.

¹⁴Source: ESCT (European Shopping Centre Trust)

significant decline in their retail trade volume. However, Sweden stood up as one of the few countries where an increase is observed despite the overall tendency of decline in the retail trade volume across globe.

Figure 2 looks at a longer time period and breaks down the changes in Swedish household consumption during 1993-2014. We see that retail trade has a steadily increasing trend, where the relative increase in the consumption of durable goods exceeds the non-durable goods around the year 2005 and maintains its increasing pattern.

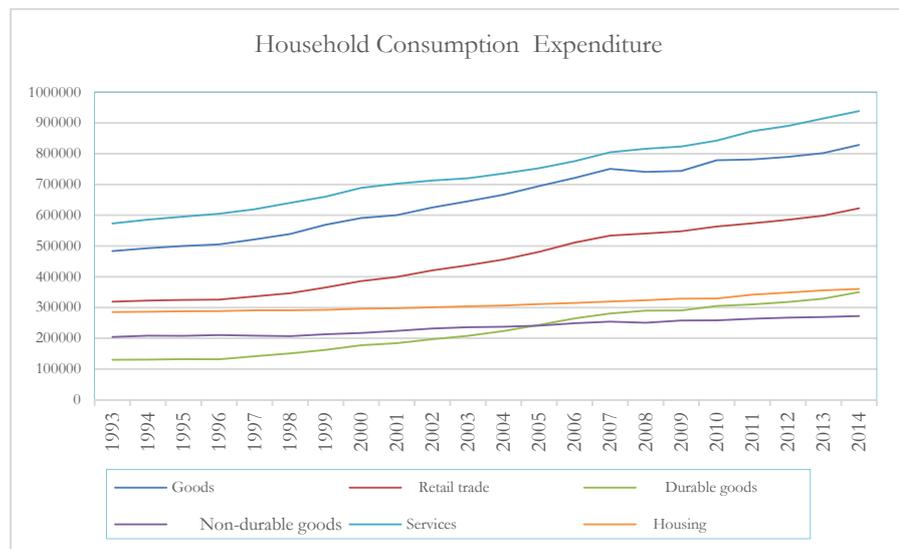


Figure 2. Changes in the household consumption expenditure in Sweden, 1993-2014, Source: HUI Research, Snabbfakta

The map in Figure 3 displays the spatial distribution of retail stores across Swedish municipalities¹⁵. Each dot represents 100 stores in a given municipality. We can see a clustering in the southern part of the country as with population and all other economic activities and specifically around the three metropolitan regions of Stockholm, Malmö and Gothenburg. These three metropolitan regions account for almost half of the employment in the Swedish retail sector.

¹⁵ The data used in the map are from 2008.

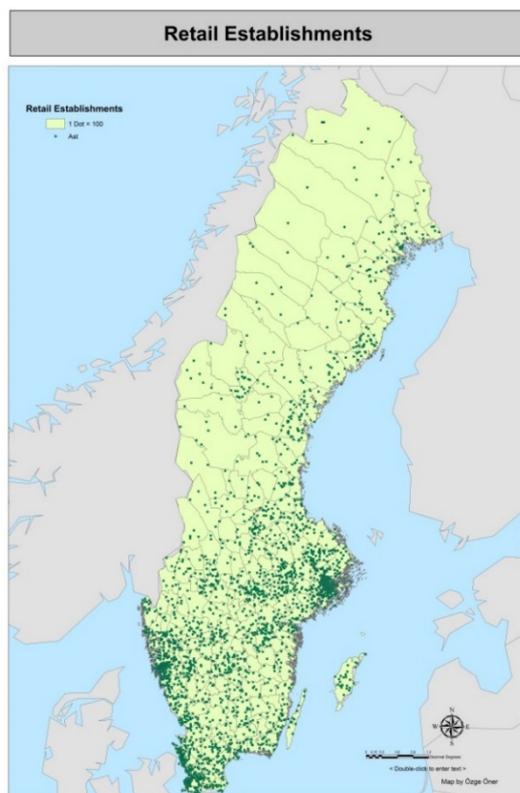


Figure 3. Retail establishments in the Swedish market

When we look at the composition of the sector in Sweden, by the year 2012, approximately 17 percent of the sector consists of stores that sell nondurable goods, and this percentage is approximately 83 percent for durable retailing. Table 4 divides the composition of the sector based on the size of the firms. We see that the sector is heavily dominated by small firms in terms of number of employees, and this situation is more obvious for durable retailing than it is for nondurables.

Table 4. Number of retail firms by firm size, 2012

Firm size	Retail (All)	Nondurables	Durables
0	36 373	4 819	31 554
1-4	15 706	3 274	12 432
5-9	4 664	1 046	3 618
10-19	2 050	777	1 273
20-49	847	447	400
50-99	240	136	104
100-199	105	59	46
200-499	50	7	43
500-	61	14	47
TOTAL	60 096	10 579	49 517

Source: HUI Research, *Branschfakta*

5. Chapters of the thesis

5.1. *Market reach for retail services*

The location of retail services is concentrated in places with large market potential. The market potential relevant for retail location is a function of residential location and the willingness of consumers to travel. If there is a difference in the willingness to travel for various types of shopping trips, the market potential will differ for various parts of the retailing industry. The spatial extent of demand is often operationalized through a distance decay function. The purpose of this chapter of the thesis is to estimate such distance decay functions for four retail sectors. The retail sectors are *Food, Clothing, Household* and *Specialized* retailing. In the estimations, the paper utilizes data from the Stockholm functional economic region in Sweden. The unit of observation is the small areas for market statistics (SAMS) with a spatial resolution of approximately 1300 sub-areas of this region. The results show that there are differences in the distance decay of the four sectors in accordance with the theory on retail location.

There are two main contributions of this paper. First, the paper outlines a method that allows for market reach and distance decay estimations for the retail sector in the lack of consumer data. Second, it contributes to the existing literature by providing a rather robust way to categorize various types of retailing activities based on a theoretical and an empirical ground.

5.2. *Location and co-location in retail - A probabilistic approach using geo-coded data for metropolitan retail markets*

This paper employs a unique empirical approach to characterize location and co-location in the metropolitan retail markets. We employ geocoded data at a fine spatial resolution for Sweden's metropolitan areas to assess retail clusters and their place in urban space from several angles. The paper models the probability of a specific type of retail unit to be established in a 250 by 250 square as a function of (i) the presence of other similar retail establishments, (ii) the presence of stores that belong to other retail sectors, and (iii) other characteristics of the square area and its access to demand in the pertinent urban landscape. The analysis clarifies which types of retail clusters one can expect to find in a metropolitan region and where in the landscape they can be expected to be found. We analyze three distinct types of stores: clothing, household appliances, and specialized stores. The findings are consistent with predictions from bid rent theory and central place theory, and we further document negative location tendencies between shops that sell frequently

purchased products and shops that sell durables. Moreover, our results highlight the importance of demand in the close surroundings, which is particularly strong for small-scale establishments.

This paper is one of the few papers that specifically addresses the co-location phenomena in the retail sector. It allows for an overall understanding of the formation of retail clusters. The spatial resolution used in the analysis and the way traditional location theories are incorporated into the discussion distinguishes the paper from the existing literature.

5.3. Retail productivity- Investigating the influence of market size and regional hierarchy

This paper investigates the determinants of the productivity of independent retailer stores in Sweden. The paper focuses on the impact of market size and regional hierarchy while controlling for several store and employee characteristics over time. In the empirical analysis, store level data for the years 2002-2008 from Sweden are used for fixed-effect estimations. The main idea is that the demand inflow to a market is dependent on not only its size but also its place in the regional hierarchy. This implies that it is not only the size of the market that matters for the retail sector but also the respective market's place in a hierarchical order in the system of regional markets. Therefore, the analysis is conducted for central and peripheral retail markets to capture the systematic differences in the market size-productivity relationship between the two. By the use of an accessible market potential measure, the analysis also explores the impact of market potential on productivity at various distance spans (*municipal, regional and external*).

I argue that the size and nature of demand in big and central markets would lead to a greater productivity impact from the immediate market size, and the independent retailers located both in central and non-central markets would benefit from regional market potential in a similar way. The discussion on the market size-productivity relationship is also extended to capture the variations across types of retailing activities in the paper. The results show approximately a 30 percent productivity premium regarding the proximate market size of centrally located independent stores, but this impact is in the range of 10 percent for the non-centrally located stores. The regional market is found to play an equally important role for the stores located both in central and peripheral markets.

The differences in the impact that arises from the market potential measures highlight the importance of taking spatial continuum and regional hierarchy into account when looking at the market size-productivity relationship for retailers. The paper contributes to the existing literature by bringing a regional economics perspective into a productivity analysis for retailers.

5.4. Retail City – The relationship between place attractiveness and accessibility to shops

This paper debates the role of the retail sector as an urban amenity and discusses how the presence of retail stores relates to place attractiveness based on the across-cities spatial equilibrium framework of Roback (1982). Previous literature argues for the role of consumption possibilities and urban amenities for the growth and development of cities and regions (Lloyd and Clark, 2001; Clark et al., 2002; Clark, 2003a, 2003b). It is argued that as firms and individuals become more mobile, the role of consumption possibilities in a city becomes greater, which forms an attractive attribute (Glaeser et al., 2001).

In the paper, in addition to the theoretical discussion of the relationship between consumption possibilities and place attractiveness, I also offer an empirical investigation of Swedish municipalities to display this relationship by utilizing an “accessibility to shops” measure. The way access to shops is measured allows for an investigation of the relevance of shops for place attractiveness in the municipalities and in the hosting regions separately. In the empirical setting, place attractiveness is proxied by a Q ratio for housing investment in the Swedish municipalities for the years 2002-2008 based on Tobin’s transparent Q theory. The relationship between the Q ratios and accessibility to shops in a municipality and in a region is tested by fixed effect estimations, where variation across city municipalities and rural municipalities is also addressed. Consumption possibilities in municipal market boundaries (over and above the effects that arise from market scale) are found to be relevant for the place attractiveness of city municipalities, but such a relationship is not evident for rural municipalities. The results also signal a significant relationship between the Q ratio and access to shops in the region, both in the city and in rural municipalities.

The paper contributes to the existing literature by tackling the relevance of consumption possibilities for place attractiveness by looking at what is available not only in the close surroundings but also in the region. The analysis highlights the positive relationship between retailing and place attractiveness even when we control for the effects that arise due to market scale.

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