Using GIS to Explore the Retail Structure of Market Towns in Ireland

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ABSTRACT

The paper presents a Geographic Information System (GIS)-based approach to quantifying and comparing retail structures. It explores the retail landscape of the three largest market towns in County Tipperary, Republic of Ireland, namely: Clonmel, Thurles and Nenagh. The context for the study is provided through an overview of recent changes in the Irish retail sector, the dynamic of market towns and the associated challenges inherent in defining retail structure. Using demographic and retail store location data a demand threshold analysis is undertaken on custom-defined catchments for each market town (derived using a Huff Model). The paper highlights that applied GIS approaches can effectively be used to examine retail structure and to benchmark the relative under- or over-penetration of retail activity within a given set of markets. The paper also underlines the limitations inherent in such analysis and the need for high quality longitudinal data on retail demand and supply.

Keywords: Demand Threshold Analysis, Geographic Information System (GIS), Huff Model, Market Towns, Retail Structure

INTRODUCTION

Significant change has occurred within the Irish retail sector in the past few decades - most notably to the country’s underlying retail structure. Building on the momentum of a booming economy, the so-called ‘Celtic Tiger,’ shopping centres have been developed in many towns offering convenient parking, large and various stores, assortment of goods and shelter from the inclement weather (Mitchell, 2009c; Callanan, 2007b; Hofmann, 2006). Retail parks (known as power centres in North America) have emerged as a significant feature on the retail landscape of many Irish towns within the last decade (Mintel, 2008). These centres and parks compete with traditional town centres which suffer from traffic congestion, poor tenant mix; inadequate parking facilities, restricted store sizes, limited product assortments and as a result in many cases increasing vacancy (Cullen, 2009; DRA & MERA, 2008; Harrison, 2007; “Plan to build on shopping,” 2004). The average unit size and quantity of total retail space has increased greatly and almost all of it allocated to shopping centres, retail parks and to a lesser extent factory outlet centres or retail fashion parks that have largely been developed at the periphery of existing markets (Cullen, 2009).

At the height of the economic boom in Ireland, shopping centre space increased by

DOI: 10.4018/jagr.2013010102
115,635m² in 2006 and 238,856m² in 2007 (Murray, 2008) bringing the total shopping centre stock in the country to almost 2,000,000m² (Jones Lang LaSalle, 2008; Devane, 2008) with a further 395,454 m² under construction (Murray, 2008). Similarly total retail park space, also dramatically increased from 200,000m² in 2002 to estimates of between 860,000m² (Finnegan, 2007) and 1,200,000m² (Mitchell, 2009c) in 2007.

These centres and parks are predominantly occupied by national and international multiple groups that now threaten to replace the independent family owned businesses that once dominated the Irish retail landscape (Beesley, 2008; Slattery, 2010, 2009). International names such as Zara, Vera Moda; Jack Jones; H&M, Coast, Karen Millen, New Look Debenhams, T. K. Maxx and House of Fraser, all of whom arrived in the last decade are now nationally well-entrenched with extensive store networks. Furthermore there is growing evidence that, consumers in general, and in particular younger consumers’ exhibit preferences for stores with such ‘High Street’ brands over the independently owned alternative (Mintel, 2008). It is clear that significant changes are occurring to retailing in the Republic of Ireland.

The purpose of this exploratory paper is to examine the retail structure of the three largest market towns in County Tipperary, namely: Clonmel (17,008 resident population in 2006); Thurles (7,751); and, Nenagh (7,682). The paper sets out to identify differences in the retail structure of these market towns and to explore possible explanations for differences across the three towns within a GIS analytical framework.

RETAIL STRUCTURE

There are many and varied approaches to defining what is meant by ‘retail structure’ but in general they include both an industrial economic and a spatial economic component. The industrial economic component is concerned with industry configuration, specifically the numbers of stores and sales per capita (Ingene & Brown, 1987; Ingene, 1984; Ingene & Lusch 1981; Takeuchi & Bucklin, 1977), the characteristics of competitors and their inter-relationships (Miller et al., 1999; Hirschman, 1978) industry concentration (Daniel & Hernandez, 2006; Wrigley & Lowe, 2002; Akehurst, 1983, 1984), internationalization (Myers & Alexander, 2007; Hernandez, 2003; Wrigley & Lowe, 2002; Shackleton, 1996) and the regulatory framework (Wrigley & Lowe, 2002; Dawson & Sato, 1995). To understand the various meanings of retail structure it is useful to consider a number of definitions. Retail structure (Figure 1) has been defined as:

...a snapshot of the state of play in the competitive struggle between retail companies and businesses. (Akehurst & Alexander, 1995, p. vii).

The manner in which firms engage in the trade of a commodity. (Bucklin, 1972, p. 22)

The number and types of stores in urban areas and their relationship to the population of these areas. (Forbes 1972, p. 15)

The spatial distribution of retail stores and store types, including the composition of groupings of stores, spacing, and relationship to market. (Jones & Simmons, 1990, p. 474)

The definitions proposed by Bucklin (1972) and Akehurst and Alexander (1995) are confined to industry structure and make no reference to market or population structure. On the other hand, the definitions proposed by Forbes (1972) and Jones and Simmons (1990) specifically relate industry structure to market or population structure while Miller et al. (1999) identify that there are two separate components to retail structure, each of which requires individual consideration.

Retail structure pertains to the composition of retail stores by size, mix, and distribution of retailers within a geographic area... In contrast market structure involves the demographic characteristics of the customers and
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