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The role of traditional retail markets in addressing urban food deserts

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ABSTRACT

This paper refreshes the debate around urban food deserts and improves the evidence base for the social value of traditional markets. It draws upon a wider project that brings together the markets sector and policy makers to develop new evidence, tools and insights to understand and enhance the community value of traditional retail markets. One important part of that community value is the provision of accessible, good quality, healthy and affordable fresh food. Using a case study of Newcastle-upon-Tyne's Grainger Market comprising a large-scale interviewer-administered survey of market users, supplemented with insights from focus groups and interviews with key stakeholders, we aim to identify and understand the role of the market as a core food and drink shopping destination. Drawing on external indicators of neighbourhood type, grocery retail accessibility and the presence of characteristics associated with food deserts, we demonstrate the importance of traditional retail markets, such as Grainger as part of the grocery retail supply side, especially among more vulnerable consumers including the elderly and those living in relatively more deprived neighbourhoods. To do so we utilise measures of consumer interactions with the retail supply side as derived from the consumer survey data, with all data available for wider-reuse by the research community. Whilst we make policy recommendations relevant to the Newcastle case study, our objective is for this work – and the provision of associated data – to spark greater recognition among policy makers, academics and the retail sector itself of the important role of traditional retail markets in food and drink provision.

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Traditional retail market; Grainger market; Newcastle-upon-tyne; food desert; consumer survey

Introduction

Since 1990s, there have been a plethora of studies investigating evidence for the existence (or not) of urban food deserts. Definitions of food deserts vary throughout these studies, but many argue that areas with poor accessibility to good quality but affordable food could be labelled as

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Supplemental data for this article can be accessed online at https://doi.org/10.1080/09593969.2023.2198251 food deserts. These studies have focused largely on the UK and the US, but there is a growing international flavour to this research. A fuller review is provided in the following section. As well as a multitude of case study locations, definitions and methodological approaches to measure food retail accessibility, there have also been wide variations in how the retail supply-side has been defined (Sparks, Bania, and Leete 2010). There has been little exploration within food deserts research of the value of the traditional retail market, yet there is evidence that these provide high-quality affordable grocery provision (NMTF 2012). In this context, we define a traditional retail market as an indoor or outdoor market selling food, household goods, clothing and similar goods, characterised by a diverse and affordable offering, which distinguishes them from specialised markets (such as farmers markets) which have a narrower and typically less affordable offering (González and Waley 2013; González et al. 2021).

Traditional retail markets typically offer affordable and quality produce and are an important source of food and drink for low-income communities, older or more vulnerable consumers, migrants and minority groups (González et al. 2021). Typically located in the centre of cities, long established traditional retail markets in urban areas often provide excellent accessibility for residents across the city that they serve. They afford considerable potential in supporting residents in accessing healthy and affordable food and drink in urban areas, yet they are commonly overlooked in retail research and data collection (González and Taylor 2023). The paper draws upon a wider project, which brings academics and policy makers together to develop new evidence, tools and insights to understand and enhance the community value of traditional retail markets. One important part of that community value is the provision of good quality, healthy and affordable fresh food into communities that have less choice locally.

This paper aims to re-fresh the debate on urban food deserts by providing evidence for the social and economic value of traditional retail markets in providing access to healthy and affordable fresh food and drink. In this paper, we focus exclusively on Grainger Market, a large local authority-run indoor traditional market located in the city centre of Newcastle-upon-Tyne (herein referred to as 'Newcastle') in North East England. Grainger Market was built in 1835 and occupies a city centre site in Granger Town, trading six days a week. There are major multiples in proximity to the market in the city centre urban core of Newcastle. Grainger Market also enjoys excellent transport links within the city and beyond, including good bus and rail services to many suburban locations. In November 2019 – prior to the COVID-19 pandemic – the Market had 123 stalls with a footfall of around 120,000 per week (González et al. 2021).

Newcastle and neighbouring Gateshead and Tyneside have a diverse demographic, economic and social make-up and afford considerable opportunity to unpick consumer behaviours and attitudes towards food and drink shopping with a specific focus on a major traditional retail market. Our research has already demonstrated the importance and success of Grainger Market as an affordable source of quality fresh food, as well as a community asset benefitting elderly and low-income groups in Newcastle and beyond (González et al. 2021). Newcastle has also been the focus of an earlier UK Government report on food deserts commissioned by the UK Food Standard Agency (White et al. 2004). That study acknowledged the role of the market as a source of food and drink, but did not focus explicitly on its importance in addressing urban food deserts.

Drawing on a specifically commissioned large-scale survey of market users, accompanying interview and focus group insights and bespoke spatial analysis and modelling, our objective is to highlight the hugely important role of Grainger Market as a source of affordable healthy food and drink, and to drive further research and policy awareness in this arena. Our narrative is structured as follows. Firstly, we review the literature on urban food deserts, the dynamics of traditional retail markets in urban areas, and those few studies that have tried to work on both these areas. We then detail our data collection and analysis, drawing on quantitative and qualitative data collected at Grainger Market in 2019, pre-pandemic. We present our findings in the penultimate section, then conclude with a discussion of wider implications, highlighting the importance of incorporating traditional retail markets within studies of urban food deserts.

Literature review

The food desert debate

Cummins (2014) provides a history of the term food desert as it first appeared in the UK in the 1990s. Important reviews of the general literature can also be found in Beaulac, Kristjansson, and Cummins (2009); Walker, Keane, and Burke (2010); and Cummins (2014). These reviews show that evidence for the existence of food deserts is very varied. Most studies do at least show spatial variations in accessibility to urban food stores, but that there are considerable methodological variations in measuring food deserts and the data used to represent the supply side, including the range of stores that are included (Sparks, Bania, and Leete 2010), with non-branded stores and non-store based retailing (including markets) often excluded.

In terms of methodologies, many studies have used straight-line distance to nearest store, or number of stores within a certain buffer or drive time. Measuring access in this way can be problematic – no stores within say 250 metres might be compensated for by the largest store in a city being 255 metres away! To overcome these drawbacks some studies have used GIS and spatial modelling techniques to build accessibility indicators, which measure access to all stores in an urban area rather than simply the nearest (Gordon et al. (2011); Clarke, Eyre, and Guy (2002); Apparicio, Cloutier, and Shearmur (2007); Mosammam et al. (2017); Newing 2019). Other variations in results occur because many studies have used only branded/chain (often large) stores, whilst some have chosen all stores. This issue is compounded by the fact that those who look at all stores often fail to look also at size when comparing opportunities within an area. Clearly, therefore, the representation of the retail supply side and the measure(s) of foodstore access applied are important determinants of whether food deserts are deemed to exist at a local level.

As highlighted by the examples presented above, the vast majority of studies have been conducted in the UK and the US/Canada but there are interesting case studies also now available in Australasia (O Dwyer and Coveney 2006; Burns and Inglis 2007) Africa (Battersby 2019; Crush, Nickanor, and Kazembe 2018) and Asia (Kim et al. 2020). In addition to examinations of spatial variations at one point in time, some studies have looked at the evolution of food deserts over time (e.g. see Guy and David 2004). The dynamics of food deserts should be a focus of future research, building on these studies. For example, Russell and Patrick Heidkamp (2011) argued that the loss of just one supermarket had significant detrimental effects on food access for certain residents. From a more qualitative perspective (Clarke, Kirkup, and Oppewal 2012) also look at food deserts in relation to changing retail provision outside the food desert area.

Whilst Shaw (2006) provides a useful classification of 10 different types of food desert, including high-income areas, rural areas and student areas (see also Furey, Strugnell, and

Heather McIlveen 2001), the majority of studies exploring the concept of food deserts have focused on low-income urban residential areas. The lack of good-quality local grocery outlets in low-income areas, especially those of the branded firms, is especially problematic for those with limited mobility. Many studies are local in nature, typically considering only one city or metropolitan area (Smoyer-Tomic, Spence, and Amrhein 2006), yet a UK wide study by the Social Market Foundation suggested that 8% of deprived neighbourhoods in England and Wales are classed as food deserts (Corfe 2018).

A concern over spatial accessibility by income group has been supplemented by a concern over access for ethnic minorities. Raja, Changxing, and Yadav (2008) found an absence of supermarkets in neighbourhoods of 'colour when compared to white neighbourhoods' (see also Zenk et al. 2005). These concerns over food deserts, access and food vulnerability have been applied in the related field of food poverty or food insecurity – the growing spatial distribution of those that rely on food banks (or food pantries in the US) (see Smith et al. 2018, for an overview). Another concern is the growth of fast food outlets in food deserts and the question of whether (generally unhealthy) fast food outlets take the place of other food stores (Pearce et al. 2007).

The most important policy implication of food deserts is the association with poorer health, especially in low-income areas. Cummins (2014) notes that researchers have suggested that food deserts may damage public health by restricting the availability and affordability of foods that form the components of a healthy diet. This is especially relevant in relation to access to fresh fruit and vegetables. Indeed, there is growing evidence of the relationship between poverty, food deserts and the volume of fruit and vegetable consumption (Hendrickson, Smith, and Eikenberry 2006; Clark et al. 2021). However, others argue that healthy environments should include other factors beyond access to grocery stores. For example, the 'Access to Healthy Assets and Hazards' (AHAH) index (Daras et al. 2020) also provides measures of accessibility to fast food outlets, off licenses and tobacconists within its 'retail environment' domain, but does not consider other sources of (healthy) food provision. By contrast, Smith et al. (2018) produced a small area index capturing food insecurity risk across England, accounting for household demographic and economic characteristics (including household composition and indicators of income, deprivation and benefits), yet this took no account of the retail supply side. More recently, the e-Food Deserts Index (e-FDI) (Newing et al. 2021) captured the multi-dimensional nature of foodstore provision and access at a neighbourhood level, accounting for both the retail demand and supply sides (including coverage and availability of e-commerce home delivery by the major grocers), providing contemporary evidence for the existence of food deserts in both urban and rural contexts.

There are of course no easy policy solutions. In the UK, major grocers (most notably Tesco) embraced the urban-regeneration agenda with the development of large format 'Extra' stores in low-income areas often deemed to represent food deserts (Wood, Lowe, and Wrigley 2006). Rapid growth in discount retailers since the early 1990s (especially in Europe) has also continued to fill a value (low price) and spatial (deprived inner city locations) gap in the market. Coupled with growth in (branded) convenience stores, these developments have considerably improved grocery provision in many traditional food deserts, though it is acknowledged (as sumarised by Wrigley et al. 2018) that some of these developments may have had a detrimental impact on local independent retail provision. One form of local independent retail provision – traditional retail markets in urban areas – are overlooked in debates around urban food deserts and their policy implications, as explored in the following sub-section.

The dynamics of traditional retail markets

In many western cities, the demise of traditional retail spaces, particularly the high street or town centre, has a long history, which began with the growth of out of town shopping (specifically the superstore) and more recently includes competition from the internet alongside high business rates and economic uncertainty. The retail sector as a whole currently has considerable redundant space and, whilst in 2019 there were approximately 760 traditional retail markets in the UK (NMTF 2020), many of the traditional municipally-run markets are reported to be in decline, characterised by declining footfall and stall vacancy rates. In spite of a legacy of under-investment in market infrastructure as a result of local authority austerity cuts, the importance of traditional retail markets in driving footfall (Hallsworth et al. 2015) and promoting entrepreneurialism (Portas 2011) in urban centres has been recognised, with the High Streets Task Force (2020) denoting markets as a key priority for high street regeneration. Nevertheless, González and Taylor (2023) strongly assert that narratives of retail decline and narrow economic definitions of retail regeneration fail to recognise the social and cultural importance of traditional retail markets, which are not adequately captured by indicators of their economic performance.

Traditional retail markets do not typically feature within studies of consumer behaviour in relation to food and drink shopping, even though there is clear evidence that they support some more vulnerable consumers. Major empirical studies of specific consumer groups, such as elderly consumers (Angell et al. 2012), for whom both price and accessibility are important, do not report any evidence that traditional retail markets are a reliable shopping destination for these consumers, with no evidence that markets are even considered by the research team in their discussions with their study participants. This is surprising since both the retail geography and shopping-as-practice literature recognises the important social role that shopping can play (Nilsson et al. 2014; Myers and Lumbers 2008; Gregson, Crewe, and Brooks 2016), especially for older consumers for whom food shopping trips can have distinct purpose beyond provisioning (Hansson, Holmberg, and Post 2022; Pettigrew et al. 2017)

As elaborated by Watson and Studdert (2006) and Watson (2009) in their case study of eight UK markets, markets are important in promoting social inclusion, with low income, elderly and those dependent on public transport [i.e. accessibility] benefitting most from these markets. More recently, González et al. (2021), Taylor et al. (2021) and Waley et al. (2021) cite evidence which highlights the role of specific markets in supporting the most deprived residents, providing affordable food and household goods. One of the concerns in many areas in recent times is the desire of local authorities, who own the vast majority of traditional retail markets, to 'update' the markets and make them more profitable. Traditional markets are being 'pushed' towards gentrification with impacts on rents and product prices, which is claimed to displace customers who can no longer afford to shop there, putting their social and community value at risk (Taylor, González, and Northrop 2019; González and Waley 2013). The 'Handbook on best practice for market operators' (Taylor et al. 2022) highlights alternative regeneration schemes and management models to assist markets – even those that are comparatively successful – in adapting and evolving amidst wider regeneration plans, without displacing low-income consumers (see also Wearn 2021).

Markets within the food desert debate

To date, little has been discussed within the urban food desert literature on the role that traditional retail markets play in the food supply chain and in urban accessibility to fresh food, especially for residents living in low-income areas. A number of US and Canadian studies (Dimitri, Oberholtzer, and Nischan 2013; Gary-Webb et al. 2018; Larsen and Gilliland 2009; Ramirez et al. 2017; Kato and McKinney 2015) demonstrate the positive impact that farmers markets and other forms of mobile food market could afford in promoting healthy eating and lowering prices for fresh fruit and veg in both urban and rural neighbourhoods exhibiting characteristics consistent with food deserts. These studies do highlight the importance of considering foodstore provision that extends beyond supermarket retailing but, unlike our case study, these markets are open infrequently (typically weekly) and do not rival the size or diversity of goods sold at Grainger Market. Evidence from both the US (Lucan et al. 2015) and UK (González and Waley 2013) recognises that urban farmers markets typically carry smaller ranges, sell more-expensive stock and offer more restricted operating hours than both traditional retail markets and supermarket provision.

Whilst previous large-scale studies into the social role of markets have noted their potential role in addressing challenges related to healthy eating (Watson and Studdert 2006), this isn't framed in the context of accessibility or wider issues related to foodstore provision. Whelan et al. (2002) and Wrigley, Warm, and Margetts (2003), through their case study of the low-income Seacroft estate in Leeds, revealed the importance of Leeds' Kirkgate Market – a large traditional retail market in the city centre – for residents of Seacroft, defined as an archetypal food desert. Despite Seacroft lying at the edge of the city (a classic 1960s council estate associated with neighbourhood-level deprivation) a number of residents would take the bus into the city centre to buy the cheaper food products available in Kirkgate Market. The market thus acted as an important coping mechanism for many residents of Seacroft. In more recent studies, there has been more discussion on the role that markets play in urban food consumption, especially in ethnic areas of the city. For example, Joassart-Marcelli, Rossiter, and Bosco (2017) have argued that many food desert studies ignore the quality and multitude of smaller stores in so-called ethnic markets. They argue that these markets offer evidence of their positive role in providing access to affordable, fresh, healthy, and culturally appropriate foods.

With specific reference to our case study city, Newcastle, White et al. (2004) report on a major Government funded study of food deserts, which did include market stalls (including those within our case study market) in their food supply side database. Whilst they recognised that many of these market stalls offered some of the cheapest prices for the category of goods sold (e.g. fruit and veg), they did not uniquely investigate the role that the market played as a food source, often categorizing the market into an all-encompassing 'other' category. That means that the detailed breakdown of shopper characteristics that they provide for other foodstore types are not available uniquely for markets. This is despite the fact that 22% of residents said they used market stalls regularly as a source of food and drink shopping (White et al. 2004). There is clearly, therefore, a need for greater recognition of markets within studies of food access, which we aim to address in the analysis that follows. In the rest of this paper, we highlight the role that traditional retail markets play more widely in the urban food environment, through a detailed case study of consumer behaviour in Newcastle.

Methodology

This paper makes use of data collected via detailed interviewer-administered questionnaires undertaken with a representative sample of 501 Grainger Market users. These data are supplemented with insights gained from two focus groups with selected market users, plus ten targeted interviews with customers, traders, market operators and policy makers. These data were collected as part of a larger research project capturing the economic, social and cultural value of traditional retail markets. Grainger was chosen as one of the three case study markets for that project as it is large enough to provide a representative sample of customers; benefits from an active National Market Traders Federation (NMTF) trader group; attracts a diversity of consumers and combines long-standing and traditional market stalls and cafes with more recent additions serving hot food.

The 10–15 minute interviewer-administered survey (Appendix 1) was designed by an experienced project team to explore how different market user groups (e.g. by age, gender, ethnicity and income) use and value Grainger Market as a space for shopping, eating, socialising and as a community asset. A particular area of focus, as explored in this paper, was to uncover the role of the case study markets in providing access to affordable, quality and healthy fresh food. The survey sought to establish: 1. Who uses Grainger Market? 2. Market users' shopping and eating habits in and around the market, and 3. The social and cultural life of the market.

The survey captured key self-reported demographic information about respondents (including age, sex, ethnicity and employment status). Respondents were also asked to report household characteristics such as dwelling type, car ownership, presence of children and occupation for the main salary earner, the latter enabling the trained interviewers to code respondents' socio-economic group (SEG) using the 'Social Grade' classification system (NRS 2022). These questions provide key indicators of who uses Grainger market. When coupled with questions about their visit to the market, these allow us to understand how different groups use the market. To capture use of the market, questions raised included the frequency and duration of their visit, the mode of travel used and their estimated spend. Using prompts (e.g. 'to eat', 'to shop', 'to attend an event' or 'to use the facilities'), respondents were asked to specify the purpose of their visit. Respondents were asked to consider a 'typical' visit if they are a regular user of the market, or to consider this specific visit if they were an infrequent or first-time user. These introductory questions ensured that demographic quotas were met (see below) and provided context as to each respondents' usage of the market.

The survey asked a series of specific questions on respondents shopping and eating habits at the market, all of which can be understood in the context of respondent and household types. These included estimated spend on food and drink, detail on the product categories purchased (e.g. fruit and vegetables, fish and meat, prepared food or drink from cafes and food stalls). Using a number rating scale (1–10), respondents were asked to rate the quality and price of the food and drink on sale at the market, establishing their typical behaviour and attitudes towards food and drink shopping at the market. Respondents were asked to estimate the proportion of their food and drink shopping undertaken at the market, using a categorical scale ('No food shopping at the market' through to 'All food shopping at the market') and to acknowledge whether they typically also shop online for food and drink. These questions used familiar and quick to understand scales to elicit respondents' attitudes and behaviours in relation to shopping for food and drink and eating at the market.

Respondents were also asked to specify where else they typically shop for food and drink, with interviewers recording both the brand and location of supermarkets used. Respondents were able to specify other markets, local independent stores or alternative sources of food and drink (such as veg box schemes) along with the major supermarkets and discount stores. For ease of survey administration, interviewers had access to a pre-prepared list of the 36 largest and proximate branded grocery stores to Grainger Market. They were encouraged to record all stores and sources of food and drink frequently used by respondents (enabling multiple responses per respondent), with free text used to record those sources not listed. This enabled us to understand the extent to which shopping at the market was used in conjunction with other sources of food and drink. Recording the specific store visited enabled us to geolocate that store and – in conjunction with information on respondents home postcode (discussed below) – capture key metrics reflecting their distance travelled to Grainger Market and the alternative food stores used, enabling us to understand key spatial aspects of market users' food shopping behaviours.

We also collected survey respondents' home postcode enabling us to pinpoint their home neighbourhood. This allows us to understand how respondents' use of the market (such as frequency of visit) is related to their proximity and accessibility to the market. Here we assign respondents to the census Output Area (OA) that their home postcode falls within, with an OA representing the smallest areal unit for which census and neighbourhood statistics are released, typically representing approximately 125 households (ONS 2016). OAs are nested within larger areal units used for the dissemination of area-based statistics and neighbourhood policy making including lower super output areas (LSOAs). Use of these spatial building blocks enables us to link respondents to underlying indicators of neighbourhood type at a range of spatial scales. We attach national statistics related to neighbourhood composition, deprivation (MHCLG 2019), e-engagement (Alexiou and Singleton 2018) and a contemporary indicator of food-deserts at the neighbourhood level, drawn from the e-Food Desert Index (e-FDI) (Newing 2019). These enable us to consider how usage of the market, including spend, frequency of visit and products purchased is related to characteristics pertaining to respondents home neighbourhoods, to understand whether certain consumer groups are more reliant on the market. Understanding the spatial distribution of our respondents also enabled us to unpick respondents' utilisation of the Market in the context of their accessibility to both the Market and intervening shopping opportunities, including the self-reported additional foodstores used to supplement shopping at the market, as discussed above. We also use these data to infer the market catchment area, and to understand the composition and context of that area, enabling us to compare market users with the population composition within that area.

The survey also considered other activities undertaken at the market, aside from shopping and eating, including usage of facilities (e.g. toilets, seating, information stalls) and attendance at events. Likert scales (strongly agree to strongly disagree) were used to elicit respondents feelings (e.g. 'I feel safe' or 'I feel less lonely') and opinions regarding the market (e.g. 'it provides access to affordable, quality fresh food' and 'it is a community hub'). These were also used to explore interactions with traders (e.g. 'I have received help or assistance from traders') and interactions with other customers (e.g. 'I talk to people I don't know') whilst visiting the market, providing additional context as to consumers experiences in shopping at the market. We also captured responses for three open-ended questions 'Are there any changes you would like to see at the market?', 'What would you miss about this market if it wasn't here anymore?' and 'What impact would it have on you if this market wasn't here anymore', providing useful context around how and why respondents use and value Grainger Market, many of which were followed up in more detail in focus groups, outlined below.

The survey administration was undertaken by a professional consumer research company with expertise in conducting surveys in markets. The survey was tested with 10 sector representatives (market traders and managers) and piloted with 41 respondents on-site, enabling trained interviewers to test question wording and survey administration, and giving the project team an opportunity to assess fitness of collected data for the intended analysis tools, in line with the specific objectives of the survey. As a result changes were made to the ordering and phrasing of some questions, the number of show cards used was reduced and interviewer comments regarding footfall, refusal rates, and difficulties in obtaining demographic quotes were taken into account prior to implementation of the full survey.

The survey was administered in person at Grainger Market by professional researchers. over a 15-day period in March 2019 (determined to avoid school holidays, Easter and public holidays) ensuring that market users were surveyed across the full range of days of the week and times of the day that the market was in operation. Interviewers adhered to quotas to target the range of demographic groups among market users (age, gender and ethnicity) based on insight from market managers and traders. Our interviewers conducted 501 surveys, of which 470 met our quality control requirements in providing a complete set of responses to all questions, including a full home postcode, essential for linking responses to underlying neighbourhood characteristics and accessibility indicators.

One of our key strengths is the combination of quantitative and qualitative research, offset by four months to enable qualitative research to unpick trends identified from the survey data analysis and to understand the motivations behind market users' behaviours as revealed by the survey. Selected survey respondents were subsequently invited (and incentivised with a £20 voucher and travel expenses) to attend one of the two focus groups, carried out on 11th July 2019. Given the objectives of the wider project, these specifically sought the views of two vulnerable user groups – over 50s and those living in relatively more deprived neighbourhoods. Discussions were led by experienced qualitative researchers and were recorded and transcribed, with participants' permission. Discussions considered motivations for participants' usage of the market, their opinions on some of the more recent market developments (e.g. the growing prevalence of hot food stalls) and their comparison of the market with other shopping destinations and community spaces. Analysis was undertaken using Nvivo and aimed to draw out common themes and attitudes from the discussions.

The 470 complete survey responses form the basis of our spatial and statistical analysis, undertaken using SPSS and ArcGIS Pro, to identify trends and patterns, supplemented by insights from focus groups and interviews to add context and explanation. Our analysis begins in the following section by addressing the question 'Who uses Grainger market?'

Analysis and results

'Who uses Grainger market?

Our survey reveals that Grainger Market is particularly well used by women and older people, with 65% of our respondents aged 50 or over. Almost half of our respondents are retired and 38% of our respondents are women aged 60 or over. Respondents from lower social grades are over-represented within our data, with 59% of our respondents drawn from households in the C2, D and E social grades (see Table 2 for definitions). However, the Market also attracts younger consumers (14% of our respondents are aged between 18 and 29) and respondents are drawn from a range of household types and employment statuses, including single-person households (31% of respondents) and those with children (18% of respondents), whilst the majority (84%) of market users were born in the UK.

Older market users are more likely to report that visits to the market have an important social role. Over three quarters of our respondents aged 70+ agreed or strongly agreed with the statement 'I bump into people I know [at the Market]', with almost half of respondents in this age group also agreeing that they 'arrange to meet people I know' at the Market. For younger consumers (those aged up to 29), the respective proportion of respondents agreeing with these statements is 45% and 25%, thus the Market plays a more important social role for older respondents. The same holds true for notions of 'feeling like they belong' (70% agreement for those aged 70+, 47% agreement for those aged between 18 and 29) and 'feel less lonely', a statement with which 95% of our older respondents agree.

These feelings of belonging, especially among older consumers, may explain why the Market has such a loyal customer base. Over 60% of respondents report that they have been visiting the Market for over 20 years, and approx. 70% of respondents self-report that they visit Grainger Market at least weekly, demonstrating the important role of the Market as a primary shopping destination. These findings are in keeping with existing research at Grainger Market and highlight a growing trend for frequent (at least weekly) visits (Eljay 2014).

Younger market users are more likely to walk to the market (57.7% of respondents aged under 29 self-report that they travelled to the market on foot), whilst the most common mode of transport for all respondents aged over 30 was by bus, with less than 10% of our respondents travelling to the Market by car. Given the modes of transport used, it is unsurprising that market users are predominantly drawn from the locality. Our analysis reveals that respondents live a median distance of 4.5 km from the market (straight-line distance) based on their self-reported home postcode. This highlights the importance of the market to a local customer base.

Whilst these observations – all drawn directly from the survey data – are interesting, support previous research (Eljay 2014) and have been reported to stakeholders (González et al. 2021, 2019), the real strength in our analysis is the ability to link each respondent to their home neighbourhood. This enables us to unpick additional contextual information related to those neighbourhoods and to build an indicative catchment area for the market. As outlined in the following sub-section, this enables us to explore market users' characteristics in relation to the underlying composition of that catchment area and to understand the extent to which the user groups identified in our survey are over-represented relative to their prevalence in the catchment as a whole, firmly establishing who uses Grainger Market and enabling us to begin to consider why, in conjunction with our wider qualitative data.

'What is the catchment area for Grainger Market and do its users represent the composition of that area?

Figure 1 shows the distribution of market users (survey respondents) against underlying area-based deprivation drawn from the 2019 Indices of Deprivation (IoD) in England and Wales (MHCLG 2019) (detail in Table 1). As can be seen, there is a strong visual association between respondents' home locations and those neighbourhoods associated with higher levels of deprivation. Table 1 highlights that 50% of survey respondents are drawn from neighbourhoods classified as being within the 30% most deprived in England and Wales, whilst only 14% are drawn from the 30% least deprived neighbourhoods, broadly in-line with the range of neighbourhood types present across Newcastle and Gateshead. The high prevalence of customers from relatively more deprived neighbourhoods using Grainger Market supports the notion that markets such as Grainger are an important source of affordable food, drink and other goods amongst lower-income households. The focus group held at Grainger supports this notion. One focus group was specifically targeted at participants from relatively more deprived neighbourhoods and explored their motivations for shopping at the market, with discussion frequently recognising affordability, with phrases including 'cheap', 'compare prices', 'bargaining' and 'value for money' prevalent within the discussion.

Table 1. Market users profiled against IoD, with comparison to local neighbourhood composition (MHCLG 2019).

IoD DECILE (2019)	Proportion of Grainger Market Respondents	Proportion of households in Newcastle-upon-Tyne and Gateshead Local Authority Districts
1 – Most Deprived	26.17%	21.93%
2	14.04%	14.29%
3	14.47%	12.62%
4	9.79%	7.97%
5	9.15%	8.97%
6	5.53%	6.31%
7	6.38%	6.64%
8	4.04%	6.98%
9	4.26%	6.98%
10 – Least Deprived	6.17%	7.31%
n =	470 Respondents	206,307 Households

Note: MHCLG (2019). 'English indices of deprivation 2019.' Ministry of Housing, Communities and Local Government, Accessed 29th September 2019. https://www.gov.uk/government/statistics/english-indices-of-deprivation-2019.

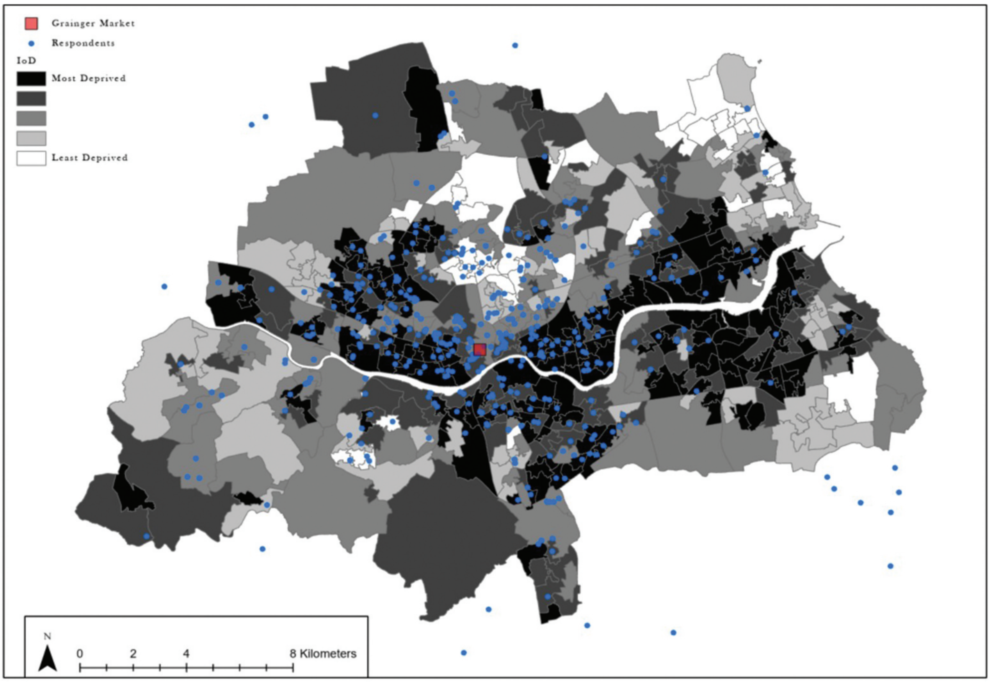

Figure 1. Location (home address) of market users (survey respondents) with underlying neighbourhood level indicator of deprivation drawn from the IoD 2019 (MHCLG 2019).

Respondents' home locations shown in Figure 1 have been used to delineate the core catchment area (the areal extent over which 50% of our survey respondents are drawn), which extends 4.5 km from the Market (Figure 2). The core catchment area comprises approximately 94,750 households. The secondary catchment (the areal extent over which the next 25% of our survey respondents are drawn) extends a further 2 km, encompassing an area approx. 6.5 km from the Market. This relatively compact catchment supports the notion that Grainger Market predominantly meets a local demand.

Construction of the market catchment area enables us to consider the characteristics of market users in comparison to the underlying neighbourhood and household characteristics within these catchments (Table 2). Respondents from less-affluent social grades C2DE, are over-represented among our market users in the wider secondary catchment area by 15 percentage points, relative to the composition of that catchment as a whole (Table 2). Market users are also far more likely to lack access to private transport than residents of the catchment as a whole, as revealed by lower rates of car ownership among our survey respondents (Table 2). This suggests that accessibility of the Market by public transport is important, with over 60% of respondents reporting that they visit the Market using local bus services, and 15% on foot, further highlighting the importance of a local customer base.

Note

Although we noted that the majority of market users are White British and born in the UK, market users are more ethnically diverse than the composition of the catchment area. We also find evidence that market users are more likely to be pensioners living alone, with over-representation of this group within our survey responses, especially within the core catchment area, compared to their prevalence within the catchment area as a whole. These observations are in line with previous research commissioned by Newcastle City Council, which highlighted the importance of Grainger Market to consumers exhibiting some of these characteristics (Eljay 2014). Our focus group with older market users uncovered the important social role that the market plays for many older consumers, offering a safe and welcoming space, which may explain the considerable loyalty towards the market among respondents from this group. Our interest is on the food and drink shopping behaviours of Grainger Market users, especially since these more vulnerable consumer groups may struggle to access or afford healthy food and drink, which we unpick in the following sub-sections, specifically considering food and drink shopping behaviours amongst our survey respondents.

What are the typical food and drink shopping behaviours among market users?

Grainger Market is an important source of grocery shopping amongst respondents, with our survey revealing that over 25% of respondents undertake at least half of their food and drink shopping at the Market and over half of respondents spend at least £10 on food and drink on a typical visit. Almost 80% of respondents self-report that they visit the Market primarily to shop, with a further 13% citing eating (using the markets' prepared and street food vendors) as the key driver of their visit. We find that younger respondents (aged 18–24, many of whom are students) and the oldest respondents (70+, most of whom are retired) are more likely to undertake at least half of their food and drink shopping at Grainger than other groups. Almost all respondents (97%) 'agree' or 'strongly agree' to our attitudinal statement that Grainger provides access to 'affordable, quality fresh food', with over 80% of respondents self-reporting that they purchase fruit and vegetables at the Market, and almost half of respondents also purchasing meat and/or fish. Our survey raised three open-ended questions, one of which asked respondents what they would miss if Grainger Market ever closed. Responses were categorised by theme, with the most commonly raised points highlighting the importance of affordable and quality food and drink. The most prevalent themes (raised by 24% of respondents) relate to its importance as a destination for purchasing fruit and veg, whilst 18% of respondents note that they would miss the affordability of goods available. Affordability was also a common theme among our focus group respondents, as noted above.

Table 2. Deprivation, social grade and car ownership.

	Core catchment		Secondary catchment	
	Survey respondents	All households in catchment	Survey respondents	All households in catchment
Social Grade – Proportion AB (Higher/intermediate managerial, administrative and professional)	11.3%	20.2%	7.7%	17.3%
Social Grade – Proportion C1 (Supervisory, clerical and junior managerial, administrative and professional)	36.2%	33.2%	25.3%%	30.6%
Social Grade – Proportion C2 (Skilled manual workers)	8.95%	14.8%	17.2%	21.1%
Social Grade – Proportion DE (semi-skilled and unskilled manual workers, and state pensioners, casual and lowest grade workers, unemployed with state benefits only)	43.6%	31.6%	49.8%	30.8%
Proportion not owning a car	66.8%	46.4%	54.2%	36.0%

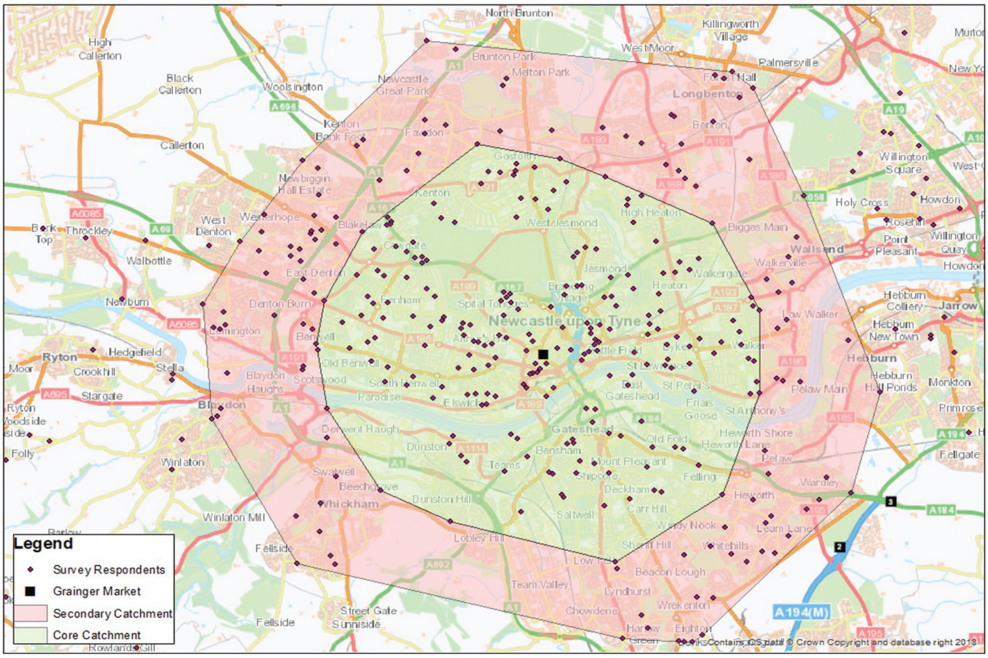

Figure 2. Grainger Market's core and secondary catchment areas.

Respondents show a low propensity to shop online for food and drink, with just 12% of respondents claiming to do so. Using a national classification of e-engagement, the Internet User Classification (IUC) (Alexiou and Singleton 2018), there is some evidence that Grainger Market users are more likely to be drawn from neighbourhoods classified as less frequent users of online services than we would expect given the composition of the catchment area. This suggests that Grainger Market users are less likely to engage in e-shopping behaviours, with over half of our respondents drawn from IUC groups labelled as 'e-withdrawn' or 'passive and uncommitted users'. Grainger Market, and other physical sources of food and drink are thus important to these consumers, though we note that our survey was carried out before the COVID-19 pandemic and many of these consumers may have embraced online shopping during the pandemic, including Grainger's own delivery service, which may play an important role in supporting those more vulnerable consumers who may struggle to access these goods and services through other means.

Market users have ample opportunity to shop for food and drink elsewhere, with a total of 102 branded grocery stores available (at the time of analysis) within the Markets' core and secondary catchment areas. A range of multiples are present, including large-format supermarkets, discounters and convenience stores, alongside household goods retailers with a food and drink offering. We identified respondents' use of non-market food stores using the open question 'Where else besides this market do you frequently shop for food and drink'? Almost all market users supplement their shopping at Grainger Market with other sources of food and drink, with respondents typically nominating between 2 and 3 additional stores. The nominated brands (e.g. Tesco) and specific stores (e.g. Tesco

Gateshead Trinity Square Extra) enable us to understand the brand choices of these respondents alongside specific spatial determinants of where they shop (Table 3).

Table 3 reveals that respondents typically nominate grocery retailers that are most associated with lower-income consumers, including a high propensity to use discounters (most notably Aldi and Lidl) alongside Tesco, Asda and Morrisons, and a lower propensity to use retailers such as Sainsbury's, Waitrose and M&S, typically associated with more affluent consumers (Thompson et al. 2012). These findings are in-line with our expectations given the propensity for market users to be from relatively more deprived neighbourhoods and their revealed preferences (discussed above) for affordable sources of food and drink. It is also in keeping with (now dated) previous research (White et al. 2004) which highlighted the importance of discounters among lower income and relatively more deprived households in Newcastle, although we acknowledge that the retail supply side has changed considerably (and notably via growth of discounters and e-commerce) since their study.

White et al. (2004) did highlight the importance that consumers place on proximity and accessibility of retail destinations, citing that their respondents most commonly choose their usual food shop based on these factors. Survey respondents in their study travelled a median distance of 1.9 km to carry out their food shop in Newcastle. Our focus groups, drawn from a sub-set of our survey respondents, also highlight the importance that some respondents place on the accessibility of Grainger Market. One respondent – who was moving house at the time – noted that Grainger Market was one of the factors that motivated them to remain in the City Centre! Nonetheless, our survey responses and subsequent analysis highlight that many market users frequently go out of their way to

Table 3. Grocery shopping destination choices among survey respondents, with comparison to supply side provision and findings from a 2004 survey of food and drink shopping behaviours in Newcastle (White et al., 2004).

Retailer	Percentage of respondents (our survey)	Usage revealed in 2004 by White et al. – percentage of respondents
Grainger Market	93.6*	22.4 **
Multiples		
Tesco	36.3	43.4
Asda	31.5	41.5
Morrisons	26.5	10.6
Sainsbury's	9.2	3.9
M&S	8.0	34.1
Waitrose	4.4	***
Co-Op	2.4	24.7
Discounters		
Aldi	22.2	6.8
Lidl	14.6	2.0
Iceland	5.8	18.9
Heron	5.0	***
Farmfoods	2.6	***
Others		
Independents	2.6%	25.3
B&M	1.8%	***
Online	12.2%	2.1%

Note: *Only 6.4% of our respondents claim to undertake no food and drink shopping at Grainger.
**Grainger not uniquely identifiable – respondents selecting 'market stalls'.
***Not captured.

shop at the Market, travelling further to visit the Market than they do to visit supermarkets and other grocery stores. Given that respondents nominated the specific stores used (rather than just the brand), we can geolocate those stores in relation to participants home neighbourhoods and capture the actual distance travelled to their grocery shopping destinations, revealing their use of the market in relation to intervening shopping opportunities.

Nine in 10 respondents live nearer to their nominated grocery store(s) than the Market. Respondents travel a median distance of 2.0 km to their nominated food stores, in line with findings reported by White et al. (2004). We have already highlighted that these same respondents travel a median distance of 4.5 km to visit Grainger Market, highlighting that many consumers are prepared to pass numerous intervening grocery shopping opportunities in order to visit Grainger Market. This highlights the importance that consumers place upon the factors that they mentioned in the open-ended questions and focus groups. As noted above, these prominently include the affordability and quality of food and drink at the market and its accessibility. Other factors raised include the atmosphere (noted by 14% of respondents in relation to 'what would you miss if this market wasn't here anymore') and the sense of community or opportunities to socialise (both raised by 11% of respondents). Our focus groups re-enforced these notions, with discussions highlighting participants' strong assertions that the market offered a friendlier, more helpful and more affordable shopping environment than the supermarkets, especially for older or more vulnerable consumers. These observations support the notion that many market users have particular practices and meaning associated with shopping at Grainger Market, which extends beyond basic provisioning, in keeping with shopping-as-practice (Hansson, Holmberg, and Post 2022; Elms, de Kervenoael, and Hallsworth 2016)

Many survey respondents and focus group participants clearly recognise that the Market offers them a number of benefits (affordability, quality and social value, among others) over alternative sources of food and drink shopping. Our analysis recognises that many participants choose to travel further to shop at the market than they do to access other food and drink shopping opportunities that they frequent. In the following subsection, we consider those findings in the wider context of the interrelated notions of retail accessibility and the presence of food deserts across the neighbourhoods that make up Grainger's catchment area.

How are market users' behaviours related to access to retail services and the presence of food desert characteristics?

To further explore the role of retail accessibility on usage of Grainger Market amongst our respondents, this section draws upon more complex measures of grocery retail provision and accessibility in Newcastle using the e-Food Desert Index (e-FDI) (Newing et al. 2021), a contemporary indicator of neighbourhood-level food deserts. Food desert characteristics are experienced as a result of a combination of poor physical accessibility to retail provision, coupled with household characteristics typically associated with low income, deprivation or vulnerability, which may limit the opportunities to interact with this already more limited supply side (Sparks, Bania, and Leete 2010). Whilst many neighbourhoods in Newcastle may experience comparatively poor access to the grocery supply side, they will not all represent food deserts.

The e-FDI is a multi-dimensional index that captures 12 factors that influence groceries accessibility as experienced by consumers at the neighbourhood level. The e-FDI incorporates a measure of grocery retail accessibility alongside other proximity and density measures of foodstore provision. It also accounts for neighbourhood-level income deprivation, car ownership and household composition alongside indicators capturing availability of – and propensity to use – e-retailing opportunities. Our survey and focus group responses, presented in the previous sub-sections, have clearly highlighted the importance of those factors in determining their shopping behaviours and usage of Grainger Market. By using a nationally comparable measure, we ensure that our observations regarding retail accessibility within Grainger Market's catchment area are representative of general trends and not overly skewed by the city-centre nature of Grainger Market.

Figure 3 and Table 4 show Market users' home locations profiled against the e-FDI, reported here as quintiles. Whilst many respondents live in neighbourhoods, which are least likely to represent food deserts – in part due to excellent accessibility to grocery retail opportunities in many parts of Newcastle – many still choose to shop at Grainger Market for some of their groceries, with 43% of survey respondents claiming that the Market was their main reason for visiting the city centre on the day they completed the survey. Nevertheless, over 25% of the neighbourhoods (LSOAs) in Newcastle and Gateshead are categorised as the quintile most likely to exhibit food desert characteristics, and a similar proportion of market users (survey respondents) are drawn from these neighbourhoods. Residents of neighbourhoods with supply and demand side characteristics associated with contemporary food deserts are thus inclined to use Grainger Market as a core part of their grocery retail shopping. This is particularly true of those respondents

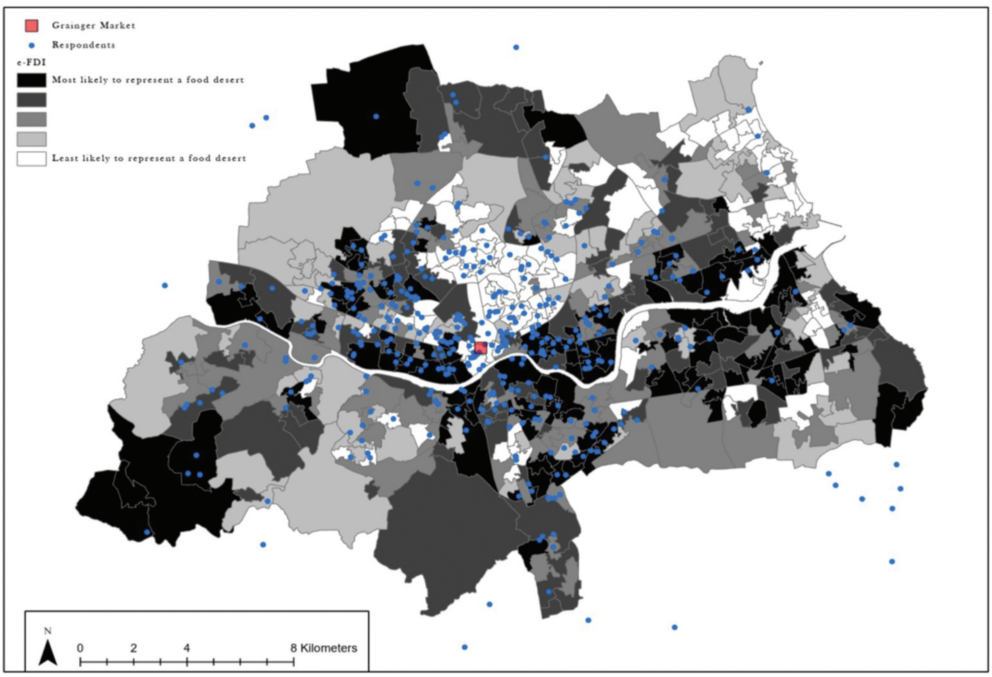

Figure 3. Market users in relation to the underlying presence of food desert characteristics across Newcastle and Gateshead drawn from the e-FDI (Newing et al., 2021).

Table 4. Market users (survey respondents), Newcastle and Gateshead LSOAs and Granger catchment profiled against the e-FDI (Newing et al., 2021).

e-FDI	Grainger Market users (survey respondents)	Proportion of households in Newcastle-upon-Tyne and Gateshead local authority districts	Proportion of households in market core catchment
Many characteristics consistent with a food desert (Quintile 1)	27.81%	26.25%	25.37%
Quintile 2	20.17%	17.28%	16.42%
Quintile 3	16.56%	17.94%	11.19%
Quintile 4	12.31%	14.62%	8.21%
Very few characteristics consistent with a food desert (Quintile 5)	23.14%	23.92%	38.81%
n =	470 Respondents	206,307 Households	94,750 Households

living in suburban neighbourhoods to the north and west of Grainger Market, where comparatively poor scores on the e-FDI are predominantly driven by lack of accessibility of grocery retail opportunities. These include the wards of Castle and Woolsington, both highlighted by White et al. (2004) as having some of the poorest foodstore provision in the city. Survey responses reveal that market users from these neighbourhoods are more likely to report that they undertake 'all' or 'most' of their food and drink shopping at Grainger Market, evidencing an important role for the Market in plugging gaps on the grocery retail supply side.

Respondents from neighbourhoods associated with food desert-like characteristics also self-report that they are more likely than other respondents to use the range of additional facilities and services at the market, which may reflect wider limitations on service provision and accessibility in those areas exhibiting food desert characteristics. We consider the implications of these observations in the following section.

Discussion and conclusions

Our detailed analysis of comprehensive survey data, and accompanying focus group insights, related to users of Newcastle's Grainger market has highlighted the importance of traditional retail markets, such as Grainger as a source of affordable and accessible quality fresh food. This is particularly true for consumers classified as 'vulnerable' including the elderly, those from lower-income households and those living in relatively more deprived neighbourhoods. Our spatial analysis identifies that Grainger market users are more likely than people living in its catchment area as a whole to come from lower social grades, to lack access to a car, to live in the most deprived neighbourhoods and to be pensioners living alone. These findings build upon previous research – specific to Grainger market – which have highlighted the long-running importance of the market to these groups (Eljay 2014). Unlike White et al. (2004) study into foodstore provision and access in Newcastle, we have specifically considered the role of Grainger market as a core source of grocery shopping among local residents. White et al. (2004) largely overlooked Grainger market in their detailed analysis of consumer behaviour in Newcastle, even though they demonstrated its widespread use among city residents. They concluded that there was limited evidence for the existence of food deserts in Newcastle as a foodstore was present within 250 m for 'the majority of streets', yet they paid no attention to store size – using only a crude indicator capturing the number of checkouts in each store – to capture the supply side.

The objective of this paper is not to dispute their findings or to demonstrate the existence of food deserts within Newcastle. However, many neighbourhoods experience characteristics consistent with a food desert (Figure 3) and our survey reveals a hugely important role for Grainger Market as a source of affordable and healthy food and drink among residents of those neighbourhoods. Many market users travel considerably further to shop at Grainger Market than other sources of food and drink that they frequent (such as branded supermarkets). The likelihood that consumers – many of whom lack personal mobility and rely on public transport – will go out of their way to shop at Grainger highlights an important role of traditional retail markets as part of the retail supply side. Grainger Market clearly has an important role in the everyday routines, practices and behaviours of many of our survey respondents and focus group participants. In addition to its accessibility and affordability, as noted in this study, visiting and shopping at Grainger Market has an important social aspect for many respondents, as summarised by González et al. (2021).

Whilst there has been some recognition that markets, such as Grainger could support wider efforts to generate footfall in town and city centres (e.g. see Portas 2011; Hallsworth et al. 2015), their role as a stand-alone retail destination is undervalued. Markets in the UK (as in the case with Grainger) are typically located within the centre of the town or city that they serve (Watson and Studdert 2006), resulting in excellent accessibility by public transport, alongside proximity to a broad range of other urban services. Thus, we argue that more could be done to promote public transport links to traditional retail markets as part of wider initiatives to enhance urban public transport provision, linking relatively more deprived neighbourhoods (which typically exhibit lower rates of car ownership) and urban centres. At the very least, impacts upon accessibility of traditional retail markets, such as Grainger should be considered by policy makers amidst any proposed changes to urban bus services linking neighbourhoods with poorer foodstore accessibility with traditional retail markets.

Our findings strongly suggest that market users show a low propensity to shop online. Nevertheless, the COVID-19 pandemic did encourage some Grainger traders to develop online shopping for home delivery, supported by Newcastle City Council (González et al. 2021). Whilst our survey was carried out in 2019 prior to Covid-19, the rapid emergence of delivery options by some market traders as a result of COVID-19 could offer new opportunities to use traditional retail markets, such as Grainger to improve access to fresh, healthy and affordable food via remote-ordering and delivery schemes akin to the supermarkets home delivery offering. As well as presenting emerging opportunities for home delivery as a tool to improve access to fresh and affordable food, our findings strongly suggest that markets could be an important policy tool to address urban food deserts. The broader project from which this paper is drawn has made a series of recommendations to market owner and operator Newcastle City Council (González et al. 2021). These include embedding the market more firmly as a community asset within the city as a tool to support policies for a healthy city. To this end, they recommend that Grainger focusses on 'celebrating and incorporating the current customer base' (González et al. 2021). More broadly, our findings highlight the need for markets to be incorporated as a core source of food and drink shopping in studies of urban foodstore provision and urban food deserts, with greater recognition of their role as affordable shopping destinations for low-income groups.

We have highlighted the importance of incorporating traditional retail markets within studies of urban food deserts. As an understudied research area with very little pre-existing data, we hope that the wider project will kick-start further work in this realm. To that end, all data collected by the broader research project are available for wider research via the Consumer Data Research Centre (CDRC). This includes all the survey data utilised within this paper, alongside interview and focus group data from all three case study markets (Grainger, Bury and Queen's [London borough of Newham] markets), accessed (application required) via https://data.cdrc.ac.uk/dataset/traditional-retail-markets-community-value-survey-data. Additionally, and to promote wider spatial analysis in relation to markets provision and accessibility, the wider project has secured data capturing the location of all registered markets in the UK, collected by the National Market Traders Federation, and made available freely via the CDRC, accessed at: https://data.cdrc.ac.uk/dataset/national-market-traders-federation. The e-FDI, which we have used to identify neighbourhoods exhibiting characteristics associated with food deserts, is also freely available via the CDRC (https://data.cdrc.ac.uk/dataset/e-food-desert-index). We are confident that the research presented in this paper, and the availability of data specific to the markets sector, will reignite the debate around urban food deserts with a particular focus on the role of traditional retail markets as a tool to improve access to fresh, healthy and affordable food and drink in urban areas.

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