

Chapter 14

Low-key bioeconomies: The case of farmers markets in Hull and the East Riding of Yorkshire

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14.1. Introduction

This chapter explores forms of the bioeconomy that are small scale, use limited amount of resources and are managed by very small businesses, participating in distribution networks outside the big supply chains. These economic activities not only fulfill the criteria for inclusion in the bioeconomy, but also have potential to promote sustainability in production and distribution processes, that is balancing economic, environmental and social interests (WECD 1987). The aim of this chapter is to examine farmers markets and small markets as an example of a neglected aspect of the bioeconomy and explore both the implications that this activity has for the perceptions of the bioeconomy and the role of the bioeconomic policies in supporting local production and sustainability.

The bioeconomy, since the 1990s when the term in various versions starts to be broadly used in official documents, has been mainly a political project aiming at using research and technology to secure a more effective use of natural resources in production (Birch 2007, 2017a; Kautto and McCormick, 2013). The focus of policy and the literature has been on industrial, capital-intensive, applications of the bioeconomy i.e., as a form of sustainability driven by growth of an aspect of the economy considered environmentally protective (Sotiropoulou and Deutz 2022). Conversely, our analysis of small farmers and open-air markets in East Yorkshire, UK provides a case study of a small-scale bioeconomy, persisting more despite than because of policy. We examine the case study as part of the local economy that appears to preserve a sustainable pattern of local food production and consumption. Using an ethnographic and document-based approach, we investigate who is involved in the small markets and why and which social groups the farmers markets and small markets appeal to. This offers a better and broader understanding of the bioeconomy and aspires to assist policy-makers and communities to better design bioeconomic policies integrating local and nationally-driven aspects.

The following sections offer the definition of the bioeconomy and a short history of the term while section three explores previous research literature about farmers markets and small markets. Section four presents the methods and approach we used for researching the small markets in East Yorkshire and the fifth section shares some basic findings about our case study markets, concerning their character, their bioeconomic features and the challenges they faced because of the covid19 pandemic. Section six presents our findings concerning the structural traits of the small markets

in East Yorkshire and the integrated discussion of our findings is in section seven. Conclusions and directions for further research are presented in final section eight.

14.2. Definition(s) of the bioeconomy and short history of the term

By the term ‘bioeconomy’ we mean the economic activity which is performed through the direct use of biogenic material (derived plants and/or animal matter that had been recently living), clearly contrasted with resources that are not biogenic, like fossil fuels and minerals (Sotiropoulou & Deutz 2022). Bioeconomy, or bio-based economy, is a term created by academics and policy makers. It contains into one word both the economic importance and the emphasis on the type of resources that are expected to be used (Albrecht et al 2010; Allen et al 2017). For that reason, its appearance in policy documents reveals the aim of the term users to simultaneously address environmental emergencies and socio-economic challenges (OECD 2009, 2018; Birch, 2007, 2017a; Kautto and McCormick, 2013; European Commission, 2018, 2020), at a time after the financial crisis of 2008, when many governments had to find solutions for economies with increasing unemployment and long-term stagnation. At the same time, other ‘sustainability economies’ intending to integrate the economy with awareness of where the resources come from, have emerged and became popular as policy terminology (Sotiropoulou & Deutz 2022), including the green economy (Antikainen et al 2016; UNEP 2009); the blue economy (Smith-Godfrey, 2016); or the circular economy (European Commission, 2015).

The role of the state authorities in shaping the bioeconomy and in creating a bioeconomic market has been prominent. Governments’ intervention was supported or occasionally demanded by the bioeconomic industries in an explicit way (Birch et al 2014;). International organisations like the OECD and the European Union, have also been supporting bioeconomic policies (OECD 2009, 2018; Albrecht et al 2010; European Commission, 2012, 2018, 2020; Kautto and McCormick, 2013; Goven and Pavone, 2015).

We see from various European Union documents that the bioeconomy gains momentum after 2010. OECD reports emphasise the pharmaceutical bioeconomy, within a narrative context of future crisis and disaster scenarios that the pharmaceutical bioeconomy would be needed to resolve (for example OECD 2009, 2018; Albrecht et al 2010; European Commission, 2012, 2018, 2020; Bell et al, 2018). The European Commission’s (2012) communication concerning sustainable growth presents the bioeconomy as a tool to ensure economic sustainability and to support innovative solutions in a variety of sectors using a coherent set of policies. In the UK, the focus has been on bioeconomy as a route to scientific state of the art solutions to health and energy issues in a world needing to reduce carbon dependences (HM Government 2009, 2018). However, the policy has been withdrawn and bioeconomy is now scarcely mentioned within plans for decarbonisation (HM Government, 2021). A sustainable and resilient food system is largely a separate policy area (DEFRA, 2022), though with overlap, for example in the search for manufactured sustainable protein options (HM Government, 2021). The food strategy is concerned primarily with supply and competitiveness; the food industry is important to the UK economy, employing a significant number of people throughout the country. The strategy is very much from the perspective of setting standards for large companies and local authorities as regards of employment/animal well-being, access to affordable food and

reducing food waste across the country. Local specialisms are acknowledged as varieties within the mass-produced food system; the only reference to small scale, or local production is that public procurement should not exclude them. Consumer access to food is assumed to be via the major retailers, who dominate the market (more than 90 % of the UK food market is through the supermarkets; Statista, 2023).

The bioeconomy, therefore, was designed to solve the economic problems that are inherent in a capitalist economy, like economic inequalities, depletion of resources, unemployment, lack of incentives for investment in real (tangible goods) production because investments in financial instruments are more profitable (Sotiropoulou & Deutz 2022). Hence knowledge becomes an incentive through the economic subsidy to big corporations, which are invited to invest in industrial facilities and produce goods with the hope of GDP growth and reduction of unemployment (Albrecht et al 2010; Birch et al 2012; Benini et al 2013; Goven and Pavone, 2015). ‘Bioeconomy’ as encapsulating the link between agricultural production and food supply has been lost in the drive for high-tech (high profit?) approaches. The almost unquestioned predominance of large-scale food producers and retailers (at least in the UK context) perpetuates the relative invisibility of small-scale solutions. The interests of those participating within the existing small-scale aspects of the bioeconomy have not been examined, notwithstanding the potential for such approaches to offer a better option for sustainability than the industrialised bioeconomy.

14.3. Farmers’ markets and small markets in previous research

There is not much literature in economics about farmers markets and small markets, much less concerning the UK context. This section is therefore primarily based on fields like food systems, ecology and research related to farming.

In literature farmers markets are understood as a space to provide survival opportunities to small farmers and access to local food to local people (e.g., Aguilar et al 1992; La Trobe 2001; Feenstra et al 2007; Alkon 2012). Farmers markets and small markets are economic spaces where producers can sell their goods (whether fresh or processed) directly to customers, bypassing or reducing the supply chains by which food is usually distributed in Western European industrialised countries (Connell et al 2008; Lerro et al 2019; Werner et al 2019). These markets are usually held in the open air, even if the climate or the weather are not reliably favourable to outdoors activity. They tend to have a regular place and time, but they do not have any permanent (that is, fixed everyday) economic space. These recurring non-permanent markets appeal to small farmers and artisans in contrast to big companies who do not seem interested in this distribution practice (McEachern et al 2010; Qendro 2015; Valpiani et al 2016). The larger retailers have invested in fixed premises with the advantages of labour-saving, storage, working conditions, consumer choice and favouring predictability and replicability etc. They have (in some cases literally) moved on from such beginnings, but rather than being a relic of a by-gone era, these markets may comprise a genuine different economic, environmental, as well as consumption, experience.

A recurrent theme in the literature is the mutual social construction of these small markets between producers and consumers. People who prefer them describe the

markets as sources of quality and/or good value food. (Holloway 2002, Kirwan 2006; Connell et al 2008, Werner et al 2019). This is a mutually reinforcing relationship between the customers' choices and the preservation of the markets. In countries where there are central policies for supporting farmers markets, like the USA, the policies utilise those same perceptions of quality and value for money (Buttenheim et al 2012, Schupp 2019, Jilcott Pitts et al 2020). Therefore, the perceptions of markets as favourable to consumers mobilise communities, decision-makers and resources in order to sustain both the producers and the spaces where producers sell their goods.

Quality of food and sustainability traits of foodstuff that is produced and consumed locally are core ideas emerging from discourse and research about farmers and small markets. Locally produced and consumed food seems to be of better quality in all aspects, including taste (Spiller 2012, Qendro 2015, Alkon 2012; Spilkova et al 2013). Small market scholars and practitioners believe that buying food in a farmers market reduces the consumers' involvement in big food chains, which are seen as harming nature and producers (both in the locality of the small markets and in other countries abroad) (Adelaja et al 1998, Archer et al 2003, Youngs 2003, Kirwan 2004, Guthrie et al 2006, Spiller 2012). At the same time, a major concern linked to farmers markets is food safety, because larger companies and/or retailers in fixed venues are perceived as more compliant with hygiene regulations (Worsfold et al 2004, Moroney et al 2009).

Comparison of prices in the farmers markets shows that they are close to the usual big market prices. Many studies have indicated this across a variety of geographic contexts (Becker et al 2007, Moroney et al 2009, Murphy 2010, Alkon 2012, Valpiani et al 2016, Behe et al 2020, Jilcott Pitts et al 2020). Selling directly to customers allows producers to receive better payments per sale than by selling to big traders at bulk prices; farmers state they avoid the one-sided exchange with large companies. But this advantage comes with a trade-off. Producers using markets to avoid big supply chains then face limits to the size of their business activity operation. Larger scale producers need larger scale buyers. Therefore, the small markets simultaneously favour small producers, and also keep them small. Small scale of production and distribution can be a positive choice for producers, for example to maintain the enterprises manageable.

The farmers, therefore, have limited financial benefits from selling quality products in the markets. They cannot demand a large mark-up, though they can set a modest premium price which they can ultimately keep themselves. The consumers on the other hand, especially women who seem to be the majority of the customers (in New Jersey, USA, Adelaja et al 1998, Italy, Lerro et al 2019), buy from farmers markets because there they can find prices of better value for money for high quality products in comparison to the premium prices of quality products in big supply chains (in Costa Rica, Aguilar et al 1992, Stour Valley, United Kingdom, La Trobe 2001, North West England, UK, Archer et al 2003, North Carolina, USA, McGuirt et al 2011, Rockler et al 2020). The markets are therefore not trying to compete on price with the big supply chains, but on a price-quality combination (perhaps coupled with a different shopping experience – i.e., community atmosphere or combination of shopping with entertainment, see Pickernell et al 2004; Russomanno and Jabson Tree 2021). Similar findings exist about UK farmers' markets. For UK localities, there is information about Leicestershire, Rutland and Staffordshire (Holloway 2002), Stroud, Devizes, Warminster, Swiss Cottage, Islington (Kirwan 2004), North West of

England (Youngs 2003), Stour Valley, (La Trobe 2001), North West of England, (Archer et al 2003), Wales (Pickernell et al 2004), UK as a whole (Moroney et al 2009), Newcastle, Durham and Hexham (Spiller 2012), and Edinburgh and Glasgow (Qendro 2015).

The economic activity of farmers markets with all its constraints or opportunities located in the small-scale markets challenges the concept of the bioeconomy, as a top-down economic arrangement. However, there is little research investigating these markets as bioeconomic spaces or activities and the extent to which they provide a sustainable experience. Our chapter aspires to examine exactly this challenge.

14.4. Approach and methods used in the project about the farmers markets in East Yorkshire

Our research was part of the THYME project, which has been a research consortium among the University of York, Teesside University and the University of Hull. THYME project investigated ways to support the local economy of the North East of England through the use of bioeconomic processes. The overall project was designed with the industrial bioeconomy in mind, and it focused on industrial sustainability, University of York, 2017; Mustalahti, 2018). Moreover, the THYME project chimes with the idea that East Yorkshire is a post-industrial region that is in need of new industrial opportunities (O'Neill 2014) and therefore the research project should contribute to that direction.

Contrary to that, the THYME sub-project “Getting to know the existing bioeconomy in East Riding: The farmers’ markets case” focused on the small producers and small traders in the area of East Yorkshire. For this project, the important question has been the construction or production of an entire market from scratch by the producers themselves and possibly by their communities, even if the same people (might) also take part in the mainstream markets, too.

In our research, we are taking a case study approach, where our geographically defined case study comprises the city of Hull (formally entitled Kingston Upon Hull, but colloquially referred to as Hull) and the East Riding of Yorkshire. In part this selection is driven by the regional remit of the THYME project. However, it carries the benefit of 1) Comprising a region with both a policy-derived industrial bioeconomy and a ‘low key’ spontaneous bioeconomy based on the region’s agriculture; 2) an ongoing programme of field visits was feasible (and could be resumed once the initial Covid-lockdown was lifted), which enables a detailed ethnographic approach. Conducting case study research enables the detailed and contextualized analysis of a situation (Yin, 2017); this is a standard approach in qualitative social science. The level of trust and understanding that the first author was able to build up with the market holders would not have been possible over a wider area, as repeat visits would have been much more difficult, if not impossible during the pandemic. Notwithstanding the close knowledge of the particular case study, the issues and relationships identified at the least raise questions that are relevant elsewhere. Further information on the case study region is given below.

We note that we excluded the markets that took place in permanent closed spaces like the Hull Trinity Market. Among the small markets we investigated, it is only one market that was taking place in a semi-closed space (community building that keeps doors open during the event, no fees or other entrance formality). Still, that community market was not permanent but held one day per week.

For our research and analysis we used two main approaches. One was critical realism in order for us to place discourse and praxis in its historical material context. Our research explores a version of reality that is well founded on actual economic practices and the social and political conditions that affect them (Archer et al 1998; Birch, 2017b). Second, for conducting field research, we used a grounded theory approach (Charmaz 2006; Glaser & Strauss 2006) and we chose to observe and discuss with those who are mostly involved with the activity first. To do this, one of us (Author 1) has conducted observation and field visits to farmers' markets and other small markets that are farmers markets in practice but self-define in other ways. She also conducted fifteen open-ended interviews with market members (producers and traders) and managers from December 2019 to April 2021, i.e. they comprise interviews before and after the pandemic of covid19 erupted. Additional methods were a review of the existing academic literature, public statements and official documents and we have presented our discourse analysis in a previous study (Sotiropoulou & Deutz 2022).

The field observations are recorded with the method of thick description, i.e. by writing down not only factual observations of the studied activity and its social and spatial context, but also events, ideas or thoughts that emerge through this ethnographic participation by observation. The data collected through thick description are analysed in two main ways: one is the quantitative-qualitative one: what patterns of activity are typical or appear with some regularity? What incidents are rare? The other way of analysing the observation data is the qualitative-quantitative one: what types of goods are available in the markets? Which goods are popular? What types of goods are difficult or easy to produce and trade? Who are the people who attend the markets?

Another aspect of the research is that the researchers lived locally during the entire duration of the project and are immersed into the local community and culture. This is a way to access the "general knowledge" that exists in the region where the research is conducted. This is especially valuable for this research project that had a strong component of economic investigation and aspires to be able to advise policy-makers. Trying to understand the local economic conditions was a fundamental approach of the research that underpins the entire subproject about the local markets.

The field research started in autumn 2019 and was being finalised in autumn-winter 2020-2021. Therefore, the data cover a time span of more than a year (18 months +), within which the Covid19 pandemic unfolded and two lockdowns have been imposed on a national level in the UK. In the table below one may see the exact days of attending market events, from which we used observations presented in the next sections.

Table 14.1. Table of market events attended
[insert table 14.1 here]

Concerning the case study area: The city of Kingston Upon Hull (henceforth, Hull) and East Riding of Yorkshire comprise two contrasting neighbouring authorities. Hull is a densely populated city (267,000 people; 3731 people/km² HCC, 2022) and includes some of the most deprived neighbourhoods in the UK (measured by poverty, health, education) (HCC, 2022). The city includes areas of restricted access to fresh food, as considered uneconomically viable for supermarkets (Corfe and Social Market Foundation 2018). A range of social enterprises respond to this by redistributing waste food (Pusz et al in press). The East Riding, not without pockets of deprivation, on average is more wealthy and sparsely populated (343,143 in 2021; 44% in rural areas (ERYC, 2023). Hull serves as the urban centre for both authorities. Industry, including food processing, also steel, cement, oil refining and chemical plants, straddles both authorities (Newsholme et al 2022). With an unemployment rate above the national average, Hull suffered disproportionately as a result of the financial crash of 2008 and is expected similarly to suffer economically as a result of the covid19 pandemic (Norman and Petrie, 2020).

Figure 14.1.
Figure 14.1 Location of the study region. The city of Kingston upon Hull (referred to as Hull) is adjacent to the East Riding of Yorkshire. The locations of the markets are indicated by crosses. The inset map shows the location of the East Riding of Yorkshire (shaded area) within the UK.

[insert Figure 14.1 here]

Hull is a location with an employment dependence on food processing, formerly with reliance on EU-labour (HCC, 2021) but a notable issue of food poverty. In the East Riding, what are termed ‘agri-food and bio-renewables’ accounts for 16,000 jobs already is seen as an area of growth by increasing the linkages between the food producing, processing and agri-chemicals. Locally produced food is seen as an area of potential, e.g., in tourism development (ERYC, undated), though no mention is made of the farmers markets.

14.5. The case of farmers’ markets & open markets in Hull and East Yorkshire

In this section we analyse the characteristics of the markets to provide an understanding of how they operate, before moving on to analyse their bioeconomic features, i.e. the economic effects of using local natural and re-used resources.

14.5.1. Structure, organisation and function of Hull and East Yorkshire farmers’ markets

The findings in this chapter refer to more or less all people who sell at the markets. As we have mentioned earlier (Sotiropoulou & Deutz, 2021) food is central, whether it is fresh or processed, depending on the market. Street food has also been popular, although the demand during the pandemic has been reduced, although some street food retailers kept being present.

The farmers’ markets and the open-air markets in East Riding only attract small farmers, artisans and small local traders. The local products are offered at the markets either by the producers directly or by small traders. The display of the products, whether done by the producers themselves or the traders allows customers to see the products live and place orders later online.

Traders are local but their non-food products are often from other regions, or even imported. Nevertheless, the existence of many food-related goods in the markets means that most food that is sold there is locally produced and/or processed, even if in some cases food items imported to the region or to the country are also available. Farmers markets are typically placing major importance on food items even if in some markets all food is processed, including included pastry goods, sweets, savoury food and candies (Adelaja et al 1998, Moroney et al 2009). There are used items sold in the farmers markets and small markets, after permission by the market managers. Not all markets allow the sale of second-hand goods. Those that allow it can attract from

occasional traders who practically perform “garage sales” to specialised traders who sell antiques and valuable vintage items.

The non-permanent character of the market is linked to the fact that markets take place in the open air in public spaces that have other uses (such as car parks). Spaces are rented from the local authority. Stands are brought by the stall holders and need to be erected and disassembled on each occasion. Markets are held in the same place one day per week in some cases, or one day per month or every two weeks. This does not mean that the producers, traders and market managers do not work on other days in order to prepare for the market event or to deliver the orders placed on a market day for a later date. Moreover, many of them attend various markets per week and per month.

Within this time framework, the entire activity is very labour intensive. The people who produce for the local small markets usually own or work for very small businesses, comprising one-person only or family members. It seems that local small production is directly linked to intensive use of labour, given that other inputs (e.g. expensive machinery or resources) are not affordable to acquire if one is self-employed or holds a very small business. According to our findings, many producers and/or traders seem to work more hours than the usual upper limit of wage labour (48 hours), with several participants reaching a work schedule of 50 to 90 hours per week, especially near major market events like festivals or the Christmas markets.

Attending the market as a stall holder is also very labour intensive because it really involves the entire working day and occasionally more than eight (8) hours of it. In most established, i.e. longer-term functioning and regular markets, people have to be at the market site very early (at 7:00 in the morning) to set up their stalls and wares and stay until early or late afternoon. Then, they also need some time to pack after the market trading is over. Working at a market on a market day is quite tiresome and exposed to weather conditions as well as to market hazards like not having a protected space for one's goods. Given the time commitment, the stall holders are not necessarily the producers of the products: it might be a member of the family, a friend, or another producer that sells products on behalf of a colleague; it might also be an employee, who is employed as a seller on the market day but has no role in the production process. This is why the small traders of the region are also well involved with the markets, because they can make available the products of various local producers in one stall covering a range of products. In that way, instead of many stalls with one or two products in each, the trader stalls offer the goods of more than one producer and facilitate the producers to use their working (or leisure) time in a different way.

Additionally, the open-air markets at East Yorkshire have a nomadic character. The same producers and traders might participate in various markets in the region, and might visit other counties as well, depending on the opportunities they find to attend more markets. Given that each market participation is not for free but has a small fee along with all the expenses and hassle to travel and set up the stall in a new place each time, this also means that the nomadicity of this economic activity must make the costs for the travel and the market fee before it covers the costs of production and the market working day. It seems, however, to be quite fair in terms of income because

customers turn also nomadic and travel to find their favourite products. Many producers announce their attendance of events in advance, so their customers know when and where to find them.

The nomadic movement of customers is also affected by the chances to have entertainment at the marketplace, which explains a lot the attendance on sunny days, the participation of many businesses with street and ready-made food and sweets and the visit of the markets by entire families, including their pets. Artistic performances at markets are not very common unless the market is a Christmas market or has connection to other special events like local festivals. In that case, entertainment and consumption are more or even directly intertwined.

Door-to-door deliveries were available in some few cases before the Covid19 pandemic but they increased after March 2020. However, the deliveries were possible only for some producers and traders, most of whom had already experimented or established a delivery practice before the lockdown of the markets. Other producers who themselves were selling at the markets could not keep up with home deliveries or reduced their provision services to the areas only to what is economically sustainable for them to deliver. It seems that the existence of small traders who have settings for home delivery allow many producers to sell products even if they cannot afford to deliver their products themselves.

14.5.2. Bioeconomy of farmers markets: Preliminary research findings from the East Yorkshire and Hull

A major finding from the research project is that the term “bioeconomy” is not used at all by the people who attend the markets, whether producers, traders or customers. They hear it for the first time due to the research. This is normal for any term that has been created *in vitro*, i.e. within academia and high policy making, but raises various questions concerning the bioeconomy as a term and discursive practice. The first issue is that the right of the researcher to name an activity the way she understands it, does not mean that she can erase the non-use of the term as “just ignorance”. It seems that just like in other cases, people who work in the economy can create theory by doing, without labelling their activity with a specific term. Theory by action is important because it can show that there are ways of thinking that can be performed before they are represented by formal discourse and well before academics and policy-makers include them in their writings and statements (Sotiropoulou 2016; Daskalaki et al 2018).

A second finding is that most of the people who participate in the farmers markets are using, processing and selling local raw materials, or a major part of their produce is based on local raw materials (both food and non-food items). Several stalls are exhibiting for sale goods which originated from recycling or upcycling materials that under the usual mainstream supply chain networks, are waste or too costly to be capitalistically recycled. This shows that those materials can be reused on a small scale (e.g., metal scrap, yarn scraps and fibres like wool, tin cans, etc.):

“For the record, I sell handmade cards, I make handmade mini albums, handmade hair clips, a pair of altered ballet shoes, wall hangings, decors, everything, just handmade recycled,

upcycled, whatever it is called nowadays, you know, it's, it's just bits and pieces I've got lying around my house that I turn into, well I wouldn't class them as artwork but something that's pretty and easy on the eye. It's just things I've got lying around my house that I, that some people look at as rubbish but I look at and think ooh I can turn that into a pin cushion or I could turn that into a hair clip or a card or, you know, things like that". (stallholder in a small city neighbourhood market)

There are several stalls at the small markets that contain products which have been industrially produced overseas. Nevertheless, the local produce is prominent and for this use of local materials and resources, whether newly produced or recycled, labour (intensiveness) corresponds to the major part of the value of the products available at the small markets.

As indicated in the previous paragraph, the farmers and small markets are a place where bioeconomic processes are combined with circular economy practices (i.e., extending the life of materials/products and maximising the value extracted from them: Mathews and Tan 2011). The example of the blacksmith who re/upcycles metal scraps to artwork is eloquent in this case because his intensive labour "produces" the ecosystem which stayed unaffected through the recovery of the supposedly waste material (Sotiropoulou & Deutz 2021).

Only a minor part of the values created and reproduced within a farmers' market value resemble the bioeconomy routes to value creation envisaged by the corporate definitions of the bioeconomy (Capital Economics 2015; Ramcilovic-Suominen & Pulzl 2018). Monetary income is just one part of the environmental, social, cultural and economic values that are produced through the farmers' markets bioeconomy. However, all those values taken together appear to make a strong case for benefits to both the producers and the consumers participation in transactions in a farmers market (La Trobe 2008; Qendro 2015; Hardy & Bartolotta 2021, Manser 2022).

Many of the producers and traders do not participate at all in the distribution networks of the mainstream economy with the products they sell in the small markets. Very few of them have a collaboration with a local city or town store, which is usually a community point for selling local products, organic food and other artisan items not available in the big supply chains. The producers sometimes say this explicitly, i.e., that they do not want to sell to supermarkets or city stores and prefer the markets or private customers as their marketing outlets.

For the markets to persist in late capitalism, they need to offer some advantage not available through mainstream distribution outlets. It is possible that they are providing a distinct route to obtaining an income for producers and traders. In some cases, this could seem as a top up activity, i.e., providing some income additional to that derived from participation in mainstream economic activities (Adanacioğlu 2021, Didero et al 2021; McEachern et al 2010). We would need another project to investigate what all the details of this activity are that make the mainstream market non-convenient for the traders and producers but also for the customers; and what opportunities farmers markets offer that the mainstream economy does not or cannot provide.

Critically viewing the bioeconomy from the point of view of a farmers' market, gives a broader understanding of what the bioeconomy can be. The local bioeconomy

provides a holistic way of understanding economic activity. This compares to focusing only on the production methods whilst forgetting about the complex conditions by which a product been processed, distributed and marketed. Small-scale production has a comprehensive way of advancing certain types of the bioeconomy missing from the academic literature, and even more so from policy documents. This is even the case for questions related to sustainable processes like the agroecology (Altieri, 2009; Martinez-Torres & Rosset 2012) which is inherently inclined to be efficiently performed on a small or decentralised scale.

From the point of view of the markets, it also seems that the farmers' markets are not explicitly 'bio-' and the people who sell their products there do not use the term 'bioeconomy'. This type of market does not need to emphasise the organic origin or the sustainable character of the produce, the local scale and relatively energy non-intensiveness of production sustainability for themselves. It is the big industrial complexes that seem more in the need of bioeconomy as a term to re-establish (or re-brand) themselves as aware of the organic character of their raw materials. However, the markets do call themselves 'farmers markets' which is more human-centred as a term, although it clearly sets the markets apart from the mainstream economy – implying less processed or a shorter supply chain. In several cases the markets self-identify with their place and day of the week they are held (for example, the Beverley Saturday market) and they avoid to lean with other definitions about their content, like 'farmers market'.

However, there is a major question about the sustainability aspects of those small and locally and/or grassroots organised markets (Sotiropoulou & Deutz 2021). We note how the small markets in East Yorkshire with their attachment to the local economy and their inherent "save everything", structural avoidance of overproduction and of waste, show the potential they have in terms of sustainability. Therefore, it is not only the re-use of second-hand items, or the recycling and upcycling of materials, through labour-intensive processes, that might end up to overwork the producers and traders of the markets, who reportedly might work 50 and 90 hours per week, depending on the season and especially before big events like Christmas markets. It is also the entire structure of the distribution process, i.e. the markets, which allow producers, traders and customers to meet each other locally. To that we need to add that we observed and have been informed about sharing practices and donation of food in and from the markets, which is something that is observed elsewhere, including during the times of the covid19 pandemic (Ledesma et al 2021)

It is indicative how a trader and a market manager see the waste avoidance in the markets:

"Well I was quite good at managing my, the amounts that I use because what I did, a lot of it I would prepare ahead of time and freeze... If I ever really badly misjudged it, which I, I didn't really ever do to be fair, [laughs] I was always quite good at judging and I didn't have a whole lot of waste. What I would do usually if I had a bit of waste at the end of the day, was I would just make things for the fellow, my fellow farmers market people, so the other people on the market I'd just give them, make them some food for free".

"I don't think there is much waste because the majority of traders, as the day goes on when they start to reduce the price and I think most people, most members of communities know that perhaps there are some very good deals to be secured later on in the day from traders, so I don't think markets see the same waste that perhaps the supermarket and the high street do. I

think market traders are very slick in the way that they manage their business, the way that they deal with their buying and they would probably be in a position where they wouldn't be able to afford to have much waste, that most of it would have to be disposed of on the day of sale”

A particularly interesting point is the possible connection between local farmers and the markets they organise and the resistances (or at least resilient coping strategies) of small food producers worldwide towards colonising procedures which have more variable forms than outright invasion and can also be performed through policies of internal colonisation. By internal colonisation we mean the imposition of economic and cultural exploitation by some metropolises, usually the capital city, of a capitalist state at the expense of the countryside and counties. The provincial communities, including their cities, have their local economies and ways of life, but are deprived of wealth and means of production in order to be forced to participate with a limited negotiation power into the economic structures that the metropolis and its capitalists find profitable economically and politically (Hechter 1977, Mies 1988, Arabska 2018, Langan and Price 2021). The countryside affords access to land by which independent production is possible on a scale small enough to survive outside of global supply chains, but large enough for marketing (i.e., not just for personal survival). The implications of this independence remain unclear. Are the markets financially sustainable, i.e., do they provide an economic value to participants that is sufficient for them to continue? The work is long and arduous – it may provide a means to survive but may be far from an easy and comfortable lifestyle. The environmental benefits appear self-evident but have not been adequately examined.

Therefore, the existence itself of the farmers' markets in the region reveals the existence of needs that the mainstream markets and supply chains do not cover for either the farmers and their customers. This does not preclude that the organisation of markets themselves creates demand because it makes available an economic space which, if it did not exist, consumers would not buy or would not even get information about available products that cannot find or cannot learn about anywhere else. It also reveals that there is a local character of entrepreneurship that is not considered by mainstream economic assessments of the regional economy (Charles and Hodgson, 2008, University of York, 2017) and for which our economic understandings/theories are very limited. The bioeconomic process of, for example, food production can thus have various aspects. It can be small scale and follow various routes of generating income for the producers but this is very rarely discussed as a possible and viable approach (Gustafsson et al 2011).

In the interview with a market manager, we learned that there is a growth of interest in food markets, which are depicted along with artisan markets, as the original supermarkets and in 2021:

“...so markets are becoming very much about fresh produce, about food and again, markets at the moment, we understand from our research there are about twelve hundred, one thousand two hundred traditional markets in the UK, now they are supported by some forty two thousand small and medium size businesses who rely on local markets for the sale of their goods...

In our question about the importance of the market income for traders and (direct) producer-sellers, the same manager stated that:

“I don't know the value of what a trader may have in income, I would suggest that it probably varies quite considerably. There are some market traders who only trade on markets as perhaps a hobby or as additional income to their main job but our feeling is now that as a result of the pandemic where sadly many people have seen their employment displaced and the, the feed, the feedback we're having from operators is that there are more people now interested in looking at market trading as a business because obviously it is low risk, it's low cost set up, so I think markets are going to be a much more significant employer going into the future than perhaps they've been in recent years”.

Connected to this, is the issue of how the communities of the farmers, both in the areas of production of the goods and in the areas of distribution of the goods, i.e. in the areas where the markets take place, are involved with the production and distribution process and what implications the farmers' markets have for them. It is important to note that the small markets of East Yorkshire and Hull, whether they are named farmers markets or not, have a lot of non-farmers as sellers or producers. It seems that the food items are attracting other goods to be sold in the market – and at the same time, when fresh food is not extensively offered in the markets, the other stalls hold the market as an event with some regularity, while the food items return depending on the season and capacity of food producers. In that way, the small production and the subsistence characteristics it bears with it, is not seen as separated from the market but the market is integrated to the production mode(s) and to the communities within which it takes place (Bennholdt-Thomsen and Mies, 1999). This is very typical in East Yorkshire where the small food producers are very aware of their possibilities to offer products that are distributed and appreciated as local within and under the constraints of the broader capitalist market (O'Neill 2014).

14.5.3. The farmers markets and open-air markets during the Covid19 pandemic

Although the discussion about the pandemic had started amongst the public in February 2020, the markets were only impacted once the lockdown started in the UK on March 23rd 2020, which meant that all small markets had to close down¹. The lockdowns in March 2020 coincided with an unprecedented panic buying in the supermarkets, that was also observed in other countries in Europe and North America (Agha et al 2020, Laborde et al 2020, Price 2020). With the local small food markets closed, part of the bulk buying in supermarkets and possibly part of the panic might have been justified (Baldry et al 2020), and it proved that the supermarkets were not ready for this upheaval (Smith 2020).

Yorkshire was one of the regions of the UK that was financially hit the most by the Covid19 pandemic (Cross et al 2022). We have described in more detail elsewhere (Sotiropoulou & Deutz 2021) how the pandemic of Covid19 and the lockdowns affected the small markets. It is important that the markets seemed to cope more or less well although the difficulties they were experiencing were huge and they were not always permitted by policy to function as they could. Prices were kept at same levels in East Yorkshire small markets, which shows that this was a conscious choice

¹ In the survey of May 2020 conducted by NMTF (2020, p. 2) it is mentioned that some markets remained open. To the best of our knowledge, in East Yorkshire most markets closed and only few out of the markets that existed before March 2020 resumed business in summer 2020 that the markets were allowed to re-open.

in times of both supply chain upheaval and over-purchase by customers. People had outlets for shopping that were taking place in the open air, allegedly being much safer than closed spaces of shopping centres and supermarkets.

However, not only the provider and customer base decreased given the covid19 social distancing precautions, but also the expenses for keeping the market presence running increased, with more precautions to be taken or with change and/or addition of extra marketing routes. Just like in other cases (O' Hara et al 2021; Thilmany et al 2021), many traders had to shift their business from physical market appearance to home delivery or/and online selling, sometimes without previous background to this type of marketing.

Those who had already some online presence and those who could invest some running capital to create an online site or platform, found it easier to cope with the changing patterns in their customers shopping, which is a challenge that was also observed elsewhere (Bachman et al 2021). However, the usually low income of both traders, producers and consumers meant that the loss of income during the pandemic created several problems for them, because of closed markets or reduced trade (NMTF 2020).

14.6. The structural traits of the small markets

Markets have a lot of flexibility in terms of who participates and how. This coincides with the decentralised character of their management; each market has its own managers. The local regional councils are not interfering with the markets apart from dealing with possible hazards that might emerge concerning protection of the surroundings of the markets, like disposal of waste. Neither does Hull City Council interfere with the open markets that take place in the city. The Trinity Farmers Market is run by the Hull Minster, which is the cathedral of the city and the other markets have their own managers. The town councils seem to be involved sometimes with the organising of the markets or the provision of space (and charging the fee). It is clear though that there is no policy related to supporting directly the open-air markets by the local authorities and no local or central government policy that can cover the markets of East Riding, or Yorkshire. There is however a National Market Traders Federation which was established in 1899 in Yorkshire (must not be a coincidence) and the National Association of British Market Authorities in order to support market traders.

In other words, it seems that the whole activity is decentralised politically and economically. This also implies that when we are talking about local supply chains, we are talking about an entire region and not only for a village or a town (Clancy & Ruhf 2010). This is implied in the nomadicity of the traders and the activity as such but it needs to be mentioned to showcase the complexity of the small market activity. In terms of policy, the traders and producers are working more like a guild rather than an authority or government service, trying to lobby their needs to local and central government. It also means that communities, consisting of local residents, or people with strong bonds to the market community (for example people living in a place nearby but having relatives in the market venue location) are very much involved with

the markets. Although we did not interview consumers, the regular attendance of markets by Author 1 revealed that the consumers are usually local or from a nearby place. There are small communities that create their own market and communities that support a local market that they think it is beneficial to them (See also Tan 2022 about the farmers markets in Anatolia). From the research findings, it seems that a major part of the activity is quite community-driven, even if it is not officially perceived as such: word of mouth is very important for people to learn about local open-air markets and the markets at major seasonal events are well attended. A lot of the entertainment provided there can be free or donation-based and is provided by local artists and local cultural groups.

In terms of gender, although we did not have the chance in this research project to find precise demographics, it seems that women are prominent in the markets, both as traders or producers and as customers. Given that most businesses are one-person or family-run, this becomes even more evident. In many cases, different generations of the same family work together at the market. There are also many producers and traders who sell ethnic products, food, accessories, clothes or artisan decorations. We do not ask origin in this research but some market traders and producers are happy to share on their own initiative, so some are British people with diverse origin, others are immigrants living in the UK for long. We also met people who are refugees and who found an outlet for business activity at the farmers and open-air markets.

That does not mean that the markets are perfect economic spaces or ideal markets without imbalances and injustices. Class and income are the most important traits in this case as they affect the economic activity in a direct way (Deutz 2014) and our findings show that class-base inequalities were present in the East Yorkshire small markets. In some markets prices are very low but even then, the community might have not enough income to support the market as they would like to (like in Costa Rica, Aguilar et al 1992, or in North Carolina, Valpiani et al 2016). In other markets, prices are quite high, much higher than in the supermarkets of the area, which precludes the customers to those who have some regular and adequate-in-volume income. In many cases, the locally produced products, in particular the food, might have very low prices in relation to the quality and the labour that the products embody but still the prices are too high for many people who live in the region (Aguilar et al 1992, Adelaja et al 1998, Murphy 2010, McGuirt et al 2011). This is a comment we heard in general about markets, i.e. that many people love them but they think they are too expensive, even if they want to support local producers and businesses

Another issue that is also linked to class, is accessibility to the market venues: apart from the markets that are located in the city centre, most markets in other venues are reachable either by a private car or by public transport. In some cases, the public transport might not be very convenient (in the case of Hull, the bus that reaches a market might be available only at the city centre, therefore, customers may have to use two or three bus services to reach it) and in all cases it is quite expensive. The market in a town at the north of Hull city, which is very popular is also very accessible through much more convenient public transport than other markets. It is a hypothesis that the accessibility has made the market so popular and also allowed lower prices to be viable for the traders and producers. At the same time, the accessible markets are easier to access for worker class people that might not have a private car or even if they have one, it is less costly for them to visit the market.

Apart from accessibility, the means of production are also class-based. You can see in each market what self-produced products exist, what their materials are and how easy it is for each producer to produce. Therefore, one can see huge disparities in means of production: some producers might have a small allotment or garden and some have a farm; some producers have access to looming/weaving machines and others have low-tech solutions for their handicrafts; some producers have access to expensive materials to produce crafts and others recycle or upcycle. Recycling of course is very good for nature and the producers in all cases, but the question is whether some producers are limited to recycling only because they have no other means of production and raw materials available to them.

Additionally, skills and education are also distributed unevenly, i.e. for some products one needs to have received training or even a certification while for others, this is not necessary. In only one market it seems that some craft skills are shared among market participants, i.e. the artisan themselves offer to show/teach skills to anyone who wants to learn for free. It is not a coincidence that this is the market in a low-income area where it is not easy to pay for training but also it is a market where any little income made is a lifeline for the sellers.

Moreover, those who sell are not necessarily of lower income than the buyers. There are clusters of production and marketing that are segregated by class. The people who sell in the markets in reality try to sell to anyone and given the low income of the area, it seems that the income is not enough for them. One of the markets, accessible mostly by private means of transport, seemed to attract people of some economic standing. This is why people in markets want more people to know about them and not necessarily wealthier people to come. They know that they depend on low-income communities, so they hope for bigger clientele instead of a few luxury buyers. Economically speaking, they are savvy enough to know that rich people do not spend a lot on necessities by default and that it is the low-income people who do, so they try to keep some balance between the prices they can set and the economic situation of the communities they serve.

Cultural choices are also very much class-affected. From people living in Hull area that talk with the first of the authors when she tells them about her research project, it is repeatedly mentioned that markets, even those which now are mostly serving the needs of middle class of the region, were and are thought of as a low-class activity. We do not think that the people who attend the markets think that way, but it might also have been an “excursion to the low-class lifestyle” for some people who do not have to live as poor for their whole week. Another issue is the perceptions about food and how the limited lack of time for food preparation and the culture of fast-food has affected the markets and the food offered there. Street food is prominent possibly because this is closer to the quick-eating culture that exists in the area, while not all people are interested in fresh vegetables, fruit or other types of food, like dairy products, honey, or meat. However, fresh and unprocessed food also exists and in a greater variety and better quality than the biggest supermarkets. In some markets the first of the authors has been advised especially about the food by the locals, who seem to appreciate quality at good value even if this is not considered middle-class in the local culture (McEachern et al 2010).

14.7. Discussion

In the first place, even if the local producers and traders do not use the term bioeconomy, their activity seems very much linked to the meaning but in a broader sense, because the producers who sell at the small markets indeed use a lot of local resources to produce products in order to make some income. That same activity pushes the boundaries of the meaning of bioeconomy towards directions that the theory and practice have not adequately explored yet. The use of the term “bioeconomy” also raises questions about how we think of sustainability as an add-on to the economy with respect to mainstream and small markets (Klimek et al 2021), while the entire activity might have structural traits that imply the need or the effort for an inherently sustainable economic practice.

That the markets are not connected to the corporate activity that the definition of the bioeconomy usually entails, is not a deficiency. Quite the opposite, their activity falls into the sustainable side of the bioeconomy, exactly because it is local production and distribution, and the producers try to economise local resources. This practice is quite distinct from top-down policy versions of the bioeconomy, which also predominantly frame the academic literature, if not for other reason, for decentralized character of the activity. The whole concept of the farmers markets has integrated production, processing and distribution of products derived from natural resources along with the creation and/or capturing of value for the local producers. Likewise, local consumers can access basic items at a reasonable price and often without many negative environmental implications, because locally produced goods do not travel far to reach the final consumers.

Nevertheless, we need to mention here that we do not have information about the exact production processes in the farms. For example, greenhouses are visible everywhere in East Yorkshire, but it is not sure whether they are heated or not, or whether they are used only for the baby plants and not for the entire cultivation season. This might become the topic of a future research project.

The markets, therefore, are a small-scale activity compared to the big industrial plants and distribution networks that other sectors of the bioeconomy use, and more linked to the local economy. It is also an integrated approach which comprises activities from production to distribution to the final consumers, by providing opportunities of use of local resources and local skills and bringing wealth in the form of quality products and income to the people who live in the area. This does not mean that there are not any missing production sectors (like the one of clothes), but that there is some structure that covers economic activity from the production stage to final consumption for many of the products sold in the markets. The markets are part of this structure and are linked to the local producers and consumers while big industries need other processes to reach the consumers after the product has been designed or produced (Papadas et al 2017). Moreover, this big-scale activity does not guarantee either the production of the goods at a profitable rate that will persuade big producers to proceed with the new item, or that the big companies will stay long in a locality creating jobs for the local people.

The local producers are more bound to their locality than big companies and they are obliged to survive locally and produce under any conditions that as “price-takers” they can only marginally influence. They cannot just move out of a region because their profits fell and they cannot as individuals or small businesses transfer their activities easily to another region or country. The nomadic activity of the markets means that the local bioeconomic processes seem to serve the whole region of Yorkshire (many of them travel throughout Yorkshire and Lincolnshire, although we met them in East Yorkshire) by choosing to relocate regularly the distribution processes instead of relocating the production to faraway locations. The nomadicity of the distribution processes means that the local producers, traders and consumers instead of needing highly expensive or capital-intensive shopping centres, buildings and distribution networks, share the burden of distribution among themselves. This burden is not something which the big industries are always happy to undertake -for this reason they prefer big plants and shopping centres, to exploit scale economies in distribution. It is related to the need and effort of the small producers to remain in their area because for them it is too costly to relocate every time that their profits fall below a certain level.

The commitment might exist even for a big company who tries to keep a branch open in a region, but it is not a “I prefer to have economic damage to stay with my people” commitment. The difference between the profit-making of a small producer and of a big factory or trade owner is this. Big traders can afford to relocate. If a small producer cannot survive in Hull, they try to do it by having losses for some time, then they change trade (as we have seen people doing the last years during the first years of the pandemic) and then they might consider changing location. The big company has a level of profits under which they just close down stores, sometimes without notice. The local producer *wants to survive* along with their people around first and if there are profits that is good, if not, they just try to avoid losses and break even, if possible. The aims and effects of those choices are completely different on systemic level.

A low-key bioeconomy like the small markets has a sustainability potential that can be much easier checked up than the sustainability capacity of the big industries and big distribution networks. Even if our participants did not tell us, the avoidance of waste and the effort to efficiently use resources and labour is visible in the markets. The packaging is much less and consumer can access not-so-beautiful foodstuff that can be equally (or more) tasty as the “perfectly looking” goods in a supermarket (Spiller 2012, Foti & Timpanaro 2021). As we have already explained in detail (Sotiropoulou & Deutz 2021) the reduction of travelling for reaching basic necessities is an important factor to account for, both on the side of consumption and on the side of mediating between producers and consumers. A supermarket will not buy locally if it is not profitable and local producers might not afford to sell at the very low bulk prices that big food chains offer. This explains why some local foods are only available at the small markets (Szmigin et al 2003; McEachern et al 2010).

Generally, a major trait of this low-key bioeconomy is that both advantages and problems are easily visible in the small market. One can immediately find out during a visit whether any types of goods are missing or which social groups are mostly present in the market. If prices have disparities or if prices are low/high this is also visible. One can talk with the producer in the cases where the items sold are locally produced and learn about the production process – and also the labour that is

integrated in the products. This ability for all people to learn basic characteristics of the market by their mere presence at the market is compromised in big shopping facilities. People see only the final product and no producer is around. The best they can find is, in some cases of locally (meaning: nationally, in the UK) produced foods, the name of the producer is written on the plastic package along with the region where the item is produced. It is not possible to ask questions, much less to ask for advice or give feedback to the producer and trader.

Therefore, in terms of the political economy of the bioeconomy, i.e. the political bioeconomy, one would find that the local small markets are much easier to spot problems in prices or other biases in the economic activity and potentially find solutions about them than in a big food chain. The problems might be related to the items sold at the market or to the people who attend the market, given the social framework of each locality, that can have conscious or non-conscious biases and exclusions of certain groups (Alkon 2012: 143-154; Neumann & Mehlkop 2023; Pahk 2022; Russomanno & Jabson Tree 2021). The small market can allow the local producers and customers to discuss directly with each other about the economic conditions the market faces while in a big supermarket, only the commodities are present and the producers and traders have no chance to know what their consumers think, apart from knowing whether they buy an item or not. Purchasing is a decision that can be affected by many factors, not only the price, but only the price is possible to be transmitted as information from the supermarket to the producer (McEachern et al 2010).

The visibility of the challenges that the small producers and traders in the small markets face should make it easier for policy-makers to support them, instead of letting the activity and its difficulties go unnoticed. For example, if public transport is linked to the viability of the markets but also to the diversity of them and their accessibility to low-income social groups, it would be advisable to design such transport services for the markets. If the shock of the covid19 pandemic revealed the lack of delivery possibilities for local producers and traders, supporting market stall holders to explore this type of solutions and facilitating their online presence (instead of letting them have individual websites that are expensive or unsupported small accounts on social media) would mean a lot for the markets and for the general public members who do not even know what type of products and prices are accessible there.

14.8. Conclusions and directions for further research

This chapter has shown that there are bioeconomies that are organic in a local economy and exist and function in very different ways from the top-down bioeconomic processes who have emerged the last decades in academic literature, research centres and governmental spaces. The small markets of East Yorkshire make those local bioeconomies visible in a comprehensive way. We have shown previously (Sotiropoulou & Deutz 2021) that there are many things to be done to support the small markets and their bioeconomic potential.

There are possibilities for other bioeconomies but also for a critical approach to them, in order to support local communities and their productive capacities. Our research project coincided with the pandemic and the market traders and consumers'

adaptation to the new conditions continues, although they seem to cope despite the lack of authority support. Small economies and small producers seem to have an important role during crises like a pandemic and this role was not taken into account before the crisis erupted but also afterwards. In other words, small economies and small producers are still not a priority of policy and public support.

We have also argued that the markets make visible the lack of policy and infrastructure in support of the local economy: there is need for adequate venues, accessibility and public transport services along with support for delivery services that can allow producers, traders and customers to connect. There is also the huge issue of equity and inclusion in the market activity of those producers and customers who have low income, or have no car to travel or have other accessibility issues that the existing markets, which are in reality abandoned by authorities, could not resolve on their own.

The Covid19 pandemic revealed that the lack of online/digital means of production and distribution in combination with the precariousness of many small producers and traders, is also a lack of essential infrastructure that very few farmers markets producers could afford while it could be a solution to the difficulties of holding live events for the markets (Jones & Raison 2020, Worstell 2020). The lack of digital tools that are both user-friendly and widely available to local producers and farmers markets traders was known, however, before the pandemic (Pickernell et al 2004).

Finally, the lack of access to means of production is of utmost importance, also linked to policy: access to land, equipment, training or other means of production needs to be provided to those who want to become producers or are already but they are struggling to survive. Similarly, access to the equipment and training and to small capital needs to be provided to those who want or are already small traders in the markets. The same can be done to support people who recycle or upcycle, especially because their production activity is by default a social service. Generally, the local small-scale supply chains, because they consist of low- and middle-income producers with very little capital, they need public infrastructures of all types in order to perform their capabilities in full (Kumar et al 2020). However, these sorts of policies would require a change in mind-set at the national scale to move away from the emphasis on large companies as the perceived ideal/only approach to satisfying large-scale demand. Food is clearly a universal requirement, but this should not override the opportunities and benefits of small-scale solutions.

Our study shows the sustainability potential of small markets and challenges the trend in policy-making that is mostly concerned for the survival of big-business rather than sustainability per se (Benini et al 2013). In our research, we found out that there is insufficient policy interest in bolstering these low-key aspects of the economy and even more lack of support for the small producers and traders who create the markets as distribution spaces.

We would need more research about the local low-key bioeconomies and also the bioeconomies that seem to be closer to the local production capacities and local needs. We would also need to investigate how the lack of policy that supports the local bioeconomies has created constraints to local producers and consumers. Those constraints can be lifted by the adoption of adequate policies in order to allow more

local creation of value through those small distribution mechanisms that seem to be very flexible and also very linked to local conditions.

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Tale 14.1 Location of markets and the dates attended. Note that precise names are withheld to preserve anonymity. Visits from November 2019 to February 2020 were prior to Covid restrictions. Visits from August 2020 followed guidelines such as social distancing and mask wearing.

Type of market	Date of attending event	Special features
City neighbourhood market	28.11.2019	
	5.12.2019	
	8.12.2019	
	12.12.2019	
	6.2.2020	
	13.2.2020	
	15.8.2020	
	10.9.2020	
	1.10.2020	
	22.10.2020	
	17.12.2020	
City outskirts market	1.12.2019	
	22.12.2019	Christmas market
	2.2.2020	
City centre farmers market	7.12.2019	Christmas market
City open-air market not in centre	28.10.2020	
Suburb open-air market	8.12.2019	Christmas market
	8.2.2020	
	17.8.2020	
	12.9.2020	
	10.10.2020	
	24.10.2020	
	19.12.2020	

Figure 14.1 Location of the study region. The city of Kingston upon Hull (referred to as Hull) is adjacent to the East Riding of Yorkshire. The locations of the markets are indicated by crosses. The inset map shows the location of the East Riding of Yorkshire (shaded area) within the UK.

