# **Priority Places for Food Index - Emily Ennis**

## Transcript

Video: https://youtu.be/4oKOs-BoKgk

Emily Ennis: So just to begin firstly with a bit about the CDRC and who we are as some of you may not be familiar with us. So one of the reasons why the Consumer Data Research Centre was up was to provide consumer data to researchers. This was data that had otherwise previously been inaccessible beyond industry researchers. And so the CDRC was established to lead academic engagement between industry and social sciences and to use consumer data for academic research purposes. We provide unique insight into a diverse range of societal and economic challenges in collaboration with a wide range of consumer data providers.

 So moving on to talk a bit about some of our research themes. We have six core research themes at the CDRC, listed on the screen now, and essentially our aim is to demonstrate how making consumer data available to researchers can solve research questions across a variety of disciplines.

 Thinking a bit about our CDRC partners then. So where we get our data from typically comes from industry partners in the public sector and in this way we’re able to help tackle those real world problems that we set out to tackle, and it also means that in that way we work across interdisciplinary and sectoral boundaries as well.

 So that’s my introduction from the CDRC. You’ll hear a bit more from me at the end of this presentation but now I’m going to hand over to Fran to talk about the methodology behind priority places.

Fran Pontin: Thanks, Emily. So I’ll be talking to you a bit about the methods and the underlying data that goes into the tool and then Pete will go on to demo the tool for you all. So the Priority Places for Food Index was developed alongside Which?. The work we’ve started collaborating only a few months ago and what we wanted to do is we wanted to identify the places and people most at risk of food insecurity this winter. So the index has a lot of data underlying it and these fall into seven domains and they provide insight as small area geographies, so in the UK this is approximately 650 households make up one neighbourhood or a small area or geography. It brings into the index not only information about access to food but also economic barriers for food. So these first four sort of domains of the index cover the kind of physical access to food and the final three kind of encompass economic barriers to affordable food.

 So moving on to the next slide, please, Pete. I’ll talk you through a bit more of the domains in detail. So the first three of our domains actually come from the E-Food Desert Index. So this was developed in 2019 by researchers at CDRC to capture access to groceries and retail. So you may have come across the term ‘food desert’ before, so this is when people aren’t able to access food from a supermarket, and this index was created to encompass both physical and online access. So to encompass proximity to supermarket facilities we’ve taken supermarket location point data from Geolytix – they make this openly available – and we’ve calculated both the distance from each postcode to the nearest store and also the number of stores within one kilometre of a postcode and then we’ve averaged that up for those small area neighbourhoods. We’ve also looked at accessibility to supermarket retail facilities. So we’ve looked at public transport distance using key journey time statistics from the survey for England and Wales and this vision to action model so looks at how far someone would have to travel using public transport to get to their local supermarket.

 Also included in the E-Food Desert Index is access to online deliveries. So given the pandemic especially, there’s been a huge increase in the uptake of online delivery services for supermarket food. So we web scraped the E-Food Desert Index, web scraped data from the major supermarkets, calculating for each small area neighbourhood, how many supermarkets delivered to that neighbourhood, and then we also combined this with the internet user classification, so this brings in the propensity to actually use online deliveries. So neighbourhoods are classified into one of these domains from e-cultured creators and e-professionals, so those really likely to shop online, to kind of e-withdrawal and settled offline communities, so those that are kind of quite unlikely to participate in or use online delivery services. To build on the E-Food Desert Index we also wanted to capture proximity to non-food supermarket provision. So often the cheapest food can actually be found elsewhere outside of the supermarket. So to do this we used two additional open data sources, the Food Sellers Agency data of non-supermarket food provision locations, so this is actually the same data that underlines where they target their food hygiene rating as well, so you can work out the hygiene rating but also the location of those stores, so we use that underlying data, again, to calculate how many of those non-supermarket food provisions were available within a one kilometre radius. And we also look at the National Market Traders Federation database of markets places and calculated the distance to the nearest markets, the kind of open markets, where food, especially fruit and vegetables, is often cheaper to purchase.

[00:05:57) We then wanted to capture these kind of economic barriers to food. So first of all we looked at kind of the core socioeconomic barriers. So from this we took the measure of income from the index of multiple(?) deprivation which is calculated separated for each of the devolved nations and we also combined this with car access. So we used this domain to capture difficulty in being able to kind of may travel a bit further to get that cheap affordable food. The next domain I think is one of the most important, in my opinion, is a food support or family food for support domain. So this captures the extra demand for food support for areas which are already struggling and need that extra support. This included for each neighbourhood free school meal entitlement, so the number of children entitled to free school meals within that area, and so uptake of Healthy Start vouchers. So Healthy Start vouchers are available to pregnant women and children under the age of four in the most deprived areas and they can be used in supermarkets to purchase milk products and/or fruit and vegetables to supplement their shop and contribute towards that cost, the idea of helping a healthy diet. Also within this food support domain we include distance to the nearest food bank which has been calculated the same way that I described before with supermarket proximity.

Finally, we’re conscious that this winter fuel poverty is also going to be a significant burden on the household budget with the energy price cap and kind of constantly changing energy situation. So we used devolved government calculated statistics for estimating fuel poverty. For these we used regression models that take into consideration energy prices, income and energy efficiency data to estimate fuel poverty and we also included a measure of prevalence of prepayment metres within those neighbourhoods. So these prepayment metres often reflect both the higher costs of fuel that need to be paid and greater heating insecurity. So now I’ll pass over to Peter who will explain how those will be combined into the index.

Pete Baudains: Thank you, Fran. So the seven domains that Fran has just run through are all combined into a single composite or combined index. When we do this we follow the methods of a couple of previous examples of building these composite domains, such as building out the Index for Multiple Deprivation or the CDRC’s own Access to Healthy Assets and Hazards Index. So to build the overall index we first take each of the indicator level data within each of the domains, we rank, standardise and normalise the data before combining the indicators into their respective domains. We then combine the domains via a transformation of the data which minimises what’s known as ‘cancellation effects’ across the domains. So what this means is that a low score in one domain doesn’t cancel out with a high score in another domain for a given neighbourhood, instead all of the domains can contribute to indicating a high priority place. So the domains are then weighted according to the percentages shown in this slide. These were chosen to balance the effects of domains that measure sources of food, for example, where food stores might be located and the accessible to those food stores, which correspond to the top four domains shown on this slide. And we also wanted to balance that against the domains that measure the inability or the struggle for neighbourhoods to actually access those foods, so the bottom three on this slide which reflect more the socioeconomic status of the different neighbourhoods. More information about the indicator data, the domains and the index construction can be found in the Priority Places Technical Report which is available at the link shown at the bottom of this slide.

 So moving on then, I’m going to switch to a browser window, and then this is a tool that we developed as part of this project to support dissemination of the index amongst decision-makers. So this online map can be viewed at priorityplacesforfood.which.co.uk and is publically accessible to anyone that wants to look at it. Within this map we’re displaying the decile that each neighbourhood falls into according to the index, so each decile represents a different 10% increment of ranked neighbourhoods according to the index, so decile number 1 represents those neighbourhoods nationally within the top 10% according to the index. So upon loading the map is centred in Leeds and consists of only dark blue points representing the highest priority decile. So the map window can be explored as you would any online map, you can drag your mouse around and zoom in and out, and then by hovering over any of the points that represent the neighbourhoods we get a little bit more information as to how that neighbourhood fairs across each of the domains that are contained within the index. So, for example, with this neighbourhood which is on the east side of Bradford we see that this neighbourhood is in the highest priority domain according to the overall index but it’s not in the highest priority for each of the separate domains that contribute to the index. So for proximity and accessibility to supermarkets it’s in decile 6, for proximity to non-supermarket food provision it’s actually one of the lowest priority decile areas with a score of 9. So on the other hand, the access to online deliveries, the sociodemographic barriers, food support for families and the fuel poverty domains are all at the higher priority end of the index and it’s those domains that contribute to the overall index score for this particular location.

[00:13:10] So this example here can be compared against a more rural neighbourhood, such as this one over here in Suffolk. So, again, this is also considered a priority place according to the index, it’s in that top highest priority decile, but it gets to that highest priority decile for very different reasons in comparison to the previous example. So in this case it’s the proximity and accessibility to supermarkets, non-supermarket food and access to online deliveries that are high priority but the neighbourhood receives low priority scores on factors relating to sociodemographic barriers, food support for families and fuel poverty. Well, it’s 5 so it’s kind of in the middle of the range of all neighbourhoods nationally. So these two examples of these two different neighbourhoods show why different neighbourhoods might score differently according to the overall index but for different reasons.

 A couple of other features that I wanted to highlight on this tool. The first, as I said, we’re currently only showing the highest priority decile which is represented by these dark blue points but we can turn on all of the other deciles by clicking through the legend. We can turn them on and then this allows us to see how the index varies spatially over different areas. So here I’m showing London and showing kind of the different spatial effects that come into play across that area. So London is quite an interesting example, it has a lot of low priority areas according to the overall index, which on the whole is driven by this accessibility to different sources of food that is available within London. That’s despite a lot of the areas scoring quite high priority on some of the sociodemographic domains.

 So stylistically we chose to present this information using points rather than areas due to the varying geographical size of the areas that we’re analysing. So we wanted each area to carry an equal representation within the map because it contains roughly a similar number of residents. So one of the limitations resulting from this decision is that it might be difficult for any individual to understand which neighbourhood exactly they fall into but our intention in creating this map is to draw attention to the broader areas where points are plotted rather than to any individual neighbourhood or residential address.

 A couple of other pieces of functionality that are worth demonstrating on the tool is the that we can select any one of the different domains from the dropdown menu and then once we select those from the dropdown menu this then updates the map to only show that specific domain, how each neighbourhood ranks in that specific domain. Again, we’re only showing the highest priority areas here represented by the blue dots. Another feature is that we can toggle the locations, the high granular locations of the supermarkets, through that toggle switch which shows where some of the supermarkets are located. This was added to provide a more fine-grain view of supermarket accessibility and aligns with Which?’s campaign targeted at the supermarkets to make accessible food for all.

 One important thing to bear in mind when using the tool is that the index is built for each of the four devolved nations in the UK separately. This is due to slight variations in some of the underlying data sources, as Fran mentioned earlier on. So the top 10% highest priority areas are not necessarily the top 10% in the UK but they’re the top 10% within each of England, Wales, Scotland and Northern Ireland. And because of this it’s also not possible to compare neighbourhoods across countries. Actually the comparison should happen only within countries. (Pause) I’m now going to hand over back to Emily for an overview of next steps for the index.

[00:18:11]

Emily Ennis: Thanks, Pete. So just to give some indication of the kind of initial splash or initial success of the tool’s launch and also the Affordable Food for All campaign launch that began at the same time, so on the very first day of Priority Places for Food Index’s launch we had nearly 500 users of that tool, which is really quite significant, and we’ve seen a very consistent engagement with the index since that launch. So as of about July we know that the site has been visited nearly 8,500 times by over 6,500 unique visitors and that’s since November 2022. Obviously launched at the same time was Which?’s Affordable Food for All campaign and, again, as of the end of July that campaign has over 100,000 signatures, which is really quite astounding. We were very lucky… So this is just thinking about the reach and where we’ve been able to disseminate this work. So we were very lucky that in April 2023 Which? and the Food Foundation jointly ran an event in the House of Commons called Tackling the Cost of Food Crisis which we were able to attend and which really kind of focused on challenging and kind of highlighting to policymakers what’s actually happening in the UK. Which? have built consistency level reports for MPs and these have been distributed at the index’s launch as well as this House of Commons event in April. They’ve also been able to build briefings for devolved nations, so it’s Wales, Scotland and Northern Ireland.

 Beyond the kind of public engagement work that we’ve done we’ve been able to launch the data portal which contains all of the data included in the index, as well as the priority places explorer which kind of gives some… (Inaudible 00:20:18) hub(?) site that looks at the code that we use to develop the tool. We’ve also been able to put some opinion and kind of comment and analysis pieces out there as well.

 So in terms of the significance of what we’ve been able to achieve, so we know that the Priority Places for Food Index is being used as part of monitoring and evaluation techniques for policymakers, we know it’s being used as part of localised food strategies, as well as by retailers to target high priority places. When the campaign itself was launched we saw that Aldi committed to the campaign on social media by highlighting that it already complied with the action plan set out by Which?. Since then we’ve actually also seen Morrisons daily agree to increase the number of budget items sold in their convenience stores and that was reported by Which? in July of this year. So we can see already a change in service and provision and a change in kind of economic behaviours of these retailers, essentially based on the data that we were able to predict in Priority Places for Food Index and then the later work that Which? has done on the back of that exploring actual kind of provision of certain items in stores, especially in those areas of high priority.

 So moving very quickly onto the future and developments of Priority Places, so we have planned and committed to an annual autumn update which will fall in line with the release of the Autumn Budget. We’re currently toiling away behind the scenes to bring that to you. All future iterations of the tool will be open and therefore require open data so we’re currently working through the datasets that are available to us to bring that to you. Beyond that we have two further research projects. One of these is looking at mapping health inequalities and priority places to see where these places of higher priority actually coincide with poorer health outcomes, and we’re also looking at a project assessing food redistribution networks and essentially having a look to see if the food is going to those priority places as identified in the tool. There’s also, thankfully, an ongoing relationship with Which? and that is until further notice so we’re going to continue to have that platform as well to lobby supermarkets, to lobby decision-makers and policymakers and to be able to kind of bring the data into the hands of people who are able to change lives and change the data that we’re showing them.

 So I’m going to stop there, I’m very conscious of time, but really, really pleased to be able to bring this to you today and really, really looking forward to your questions.

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