



Using data to measure and map poverty and food insecurity in Northern Ireland

NIPDP Data Dialogue 2 – Report

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NIPDP Data Dialogue Report:

‘Using data to measure and map poverty and food insecurity in Northern Ireland’.

A ‘Data Dialogue’ is the **Northern Ireland Public Data Panel (NIPDP)** approach to deliberations on topics related to data use. Using a deliberative approach, panel members participate in discussion and activities to consider opinions and views on a given subject. With the support of facilitators, they collectively explore information they have been provided with, along with their own experiences and views related to address specific questions on the use of data for public good.

At the start of the day the Panel were introduced to the topics ‘**Using data to measure and map poverty and food insecurity in Northern Ireland**’ by two expert presenters. The first expert presenter introduced, the ‘**multidimensional aspect of poverty, the data landscape in Northern Ireland**’ and ‘**how administrative data is being used to study poverty around the world**’. The second expert presenter introduced the use of ‘**secondary data to map food poverty in Northern Ireland**’.

Throughout the presentations the Panel were encouraged to ask questions and to share their reflections, either verbally or via Post-it notes, which were annotated on flipcharts throughout the room. This included their initial thoughts and feelings around what was being shared, and any ideas about how they would like to see the data used.

In part three of the ‘Data Dialogue’, the Panel participated in a ‘**Knowledge Safari**’ (an interactive deliberative method designed to create small-group conversations that build upon each other; can be used to arrive at common themes, statements, principles, understanding, etc) to develop a response to the prompt questions;

Prompt questions:

- *How do you feel about your data that relates to poverty being used by researchers to inform policy and practice?*
- *Do you have any concerns about using your data in this way?*
- *Are there some data sources you are more comfortable sharing than others?*
- *Do you have a preference; for this research to be completed by academic or governmental researchers?*
- *Are there other issues around food poverty or poverty generally you would like us to explore?*

Expert presentation (1):

Poverty data landscape in Northern Ireland & how administrative data is being used to study poverty around the world.

(Dr Aideen Maguire, Administrative Data Research Centre Northern Ireland, ADRC NI).

Dr Aideen Maguire, Director of the Administrative Data Research Centre Northern Ireland (ADRC NI) gave a presentation on the current landscape of available data, what could potentially be developed in Northern Ireland, definitions of poverty, how it is currently measured, what work ADRC NI is doing in this area alongside key stakeholders, and how utilising data could assist policymakers and legislators in fighting poverty. The purpose was to understand Panel members' views on ADRC NI's proposed use of data sources such as income, benefits, social care, health, education and others to better measure and map poverty in Northern Ireland for evidence-based policymaking and interventions.

The presentation covered:

- What is poverty?

- What is administrative data?
- How is admin data being used to study poverty around the world?
- How is ADRC NI engaging with stakeholders?
- What could NI research look like?

Poverty is not just about income. It is complex, multidimensional, and shaped by a range of social determinants such as education, health, housing, employment, and justice. Using linked administrative data to better understand and measure poverty across a range of different data sets and indicators could be an additional tool to develop effective anti-poverty policies and interventions.

Poverty is often too narrowly defined, with a focus on employment status and/or income levels. However, poverty can be better understood as a cross-cutting issue and comprising lots of different 'poverties', such as:

- **Educational poverty:** Poor access to quality schooling, regardless of financial status.
- **Health poverty**, particularly mental health poverty: Lack of access to adequate mental health support.
- **Food poverty:** Inability to access or afford nutritious or culturally appropriate food.
- **Maternal health inequality:** Stark disparities in outcomes, especially in Northern Ireland.
- **Employment poverty:** Low-paid or insecure work despite being employed.
- **Systemic inequalities:** Disproportionate risks of homelessness, imprisonment, or social services involvement.

The presentation stressed that someone can be financially "secure" and still be poor in terms of education, health, opportunity, etc. Looking only at finances or benefits misses intersectional issues and is a potential weakness of non-linked or narrow data analysis.

The presenter mentioned building on the point that current poverty measures focus too much on income and benefits uptake, the presenter mentioned how this often overlooks other critical indicators. For example, two households earning the same amount may have vastly different needs (e.g. due to dependents or housing costs). Poverty thus needs to be understood through contextualised data like family size, health conditions, support systems, and local deprivation level, because poverty is contextual, not just financial. A broader lens is essential for effective policy.

The presentation then took a detailed look at administrative data. Administrative data refers to data already collected by government services during regular operations—not originally for research, but highly valuable. This includes:

- **Health & Social Care data:** GP visits, hospital admissions, prescriptions.
- **Education data:** Attendance, attainment, school records.
- **Housing data:** Homelessness status, social housing applications.
- **Justice data:** Prison records, reoffending history.
- **Census & demographic data**
- **HMRC & DfC data:** Income, employment, benefits.

This is data that already exists and is routinely collected. However, it often sits in silos, unused for the kinds of cross-cutting research that can inform real solutions. This is what would be needed for poverty research, given the intersectional nature of poverty and its contexts detailed above.

The **Administrative Data Research Centre Northern Ireland (ADRC NI)**, where **Dr Maguire** is Director and **Dr Furey** is a researcher, is one place where this type of admin data research is being explored. The researchers there would like to explore poverty in particular in greater depth using data. ADRC NI is a partnership between Queen's University Belfast, Ulster University, which with NISRA becomes ADR NI. It is part of a UK-wide ADR network including ADR Scotland, Wales, and England, which makes secure, anonymised access to linked administrative data possible for

researchers and aims to improve lives through data-driven policy relevant research. ADRC NI works to connect data, people, and insights across sectors to tackle real-world issues like poverty, inequality, and disadvantage.

The presentation suggested that administrative data is powerful for several reasons. It covers entire populations, not just samples, making the sizes of studies and therefore the evidence that can be drawn from it, more robust. It captures people missed by surveys, particularly those known to be less likely to fill in surveys (e.g. men, those with poor mental health, those in deprived areas). Because government data/admin data has been collected over long periods of time, it enables longitudinal research, tracking individuals over decades to understand life trajectories. This helps better understand causes and consequences as well as contexts, which as noted, is important to understand and address poverty effectively. This also then supports preventative action; for example, linking care experience in childhood to later homelessness risk, and helps design policy and service interventions.

Finally, Dr Maguire's presentation stressed that we must stop looking at issues (poverty, housing, health) in isolation. Poverty is cross-cutting, touching on many different areas (and government departments). Data linkage across these departments and datasets allows us to see patterns and root causes, not just symptoms. Arguably, there's a moral and practical obligation to use the data we already collect to make things better.

"This isn't blue-sky thinking. This is about using what already exists—securely, ethically, and with purpose."

Panel Discussion (1)

While the Panel asked questions, intermittently, during Dr Maguire's presentation, there was also a dedicated discussion at the end. The Panel raised several salient points through the presentation and during the discussion.

At the outset, several members asked about definitions of poverty and how it is measured, particularly relative vs absolute poverty. Dr Furey answered that relative poverty compares household income with others' household income in a given year (i.e. the past calendar year or financial year) whereas absolute poverty compares data from 2010, 2011, etc comparing current levels to past levels to develop an understanding of trajectory and change.

Several members raised what they felt was the disparate nature of different organisations working on poverty, which they felt was compounded by different 'types' of poverty discussed during the presentation, e.g. fuel poverty, education poverty, digital poverty, etc. While members appreciated and understood the need to contextualise poverty and understand it from a range of areas, they felt that there is a need for collective efforts to combat 'poverty' holistically. As one member put it, "When you keep using nouns in front of 'poverty' you'll never get anywhere".

There was a substantial discussion about the 'siloes' nature of both data and policy and interventions around poverty, which was again linked to the nouns ahead of 'poverty' (e.g. Food poverty, fuel poverty, etc). Members expressed surprise at the amount of data collected and held, and not currently being used. It was felt that the 'silos' of different departments contributed to this. One solution suggested and discussed was something like a 'People's Minister' or 'Minister for Poverty' which could have oversight and overview powers of collective efforts around poverty, including how data is used within this.

Around the nature of administrative data and its potential, members repeatedly mentioned a frustrated view that even if the data or information is collected, it will still sit in silos, as mentioned above, because so much of NI government is conducted this way in their view. The limitation of admin data, particularly around harder to reach groups who do not interact with government or services, such as rough sleepers, was raised as a concern in terms of the reliability and utility of administrative data. Panel members felt it was important for those pursuing the use

of administrative data for research to consider these limitations, particularly where research is used to develop policy that will impact people's lives. Focus groups or initiatives involving people with lived experience was recommended by Panel members when it comes to research and interventions around poverty. There was an emphasis on different types of knowledge beyond academic knowledge, to include community knowledge and the knowledge of lived experience; it was felt that this would go some way to address concerns about people not being captured in datasets and in highlighting other issues that might not be as clear through the data.

At the conclusion of the discussion portion of Part 1, members were broadly supportive of research using linked administrative data, underlining the importance of data being de-identified and accessible only in a safe setting. This was first raised and discussed at Data Dialogue 1, and was remembered by Panellists as something they felt was crucial to the acceptability of linked data research, which also suggests a positive outcome for the running of NIPDP and its existence in general.

Expert presentation (2):

Using secondary data to map food poverty in Northern Ireland.

(Dr Sinéad Furey, Ulster University, ADRC NI).

Dr Sinéad Furey of Ulster University and ADRC NI presented on research mapping food poverty and food insecurity in Northern Ireland using linked administrative data, which is working to develop a food poverty index for Northern Ireland. The purpose was to explain and explore the work being done, take Panel members' questions, queries and concerns, and begin to discuss their views on data being used in this way as well as ascertain if there were additional areas the research team should be exploring.

The core message to come out of the presentation was that tackling food insecurity in Northern Ireland requires a shift from emergency responses to systemic, data-driven, and dignified support mechanisms that address root causes such as poverty,

education, transport, and cooking skills, through collaborative, place-based solutions like social supermarkets and informed policymaking. It was emphasised that Food insecurity is not isolated. It is deeply connected with other forms of deprivation—fuel, transport, education, and health—creating layers of vulnerability.

A key proposed outcome of the research presented in this section is the development of a food security index for Northern Ireland. The tool is designed to overlay various datasets such as education, health, transport, and housing to identify and target interventions. Accessing all of these different datasets to layer on top of each other has proven challenging, however. While existing research (e.g., on fuel poverty) could also be integrated, caution is being exercised to protect personal data and community sensitivities. This was echoed by Panel members and drawn out further in the discussion portion of this section, particularly as mapping these issues in a geographic way shows, in a very visible way, where there are problems. For example, mapping of co-existing problems like fuel poverty, transport poverty, and food poverty shows concentrated hardship, especially in areas like Fermanagh and Omagh. There was a discussion around stigma between the research and the Panel around this, which led to a strong desire for future validation of the index using survey data and door-to-door approaches.

Obesity data (especially among primary school children) correlates with food insecurity and deprivation and is considered for inclusion in the mapping. Other suggested data overlays include: diabetes, affordability, cooking skills, school meal eligibility.

The presentation mentioned social supermarkets and food banks. The Panel asked for clarification on the difference between these two, which was then explained and discussed. It emerged that there is a clear distinction between food banks (emergency aid, no choice, no payment) and social supermarkets (some choice, subsidised cost, support services). Social supermarkets offer a more dignified and sustainable form of food support, and councils across Northern Ireland have

received funding (~£2.5 million in 2023–24) to implement them. However, public awareness about social supermarkets is low despite their growing presence, which was evident within Panel members' own lack of awareness, as mentioned.

Cooking skills and detachment from food is also a theme emerging from the research around food poverty and helping researchers to understand the issue contextually. A societal shift has occurred where people (regardless of income) are increasingly detached from cooking and basic food knowledge. The issue is not solely economic, but also cultural and educational. The Panel members raised and discussed this, suggested interventions around practical food education, which it seems school systems and public education have moved away from.

Panel members also wondered about the potential for technological interventions and solutions around food waste, which might assist some families in accessing nutritious food at a more suitable price. Food waste apps like "Too Good To Go" and "Olio" were mentioned, but there's concern that such solutions don't address the root causes of poor nutrition. There's support for using these to reduce waste but scepticism around their broader utility in solving food insecurity. It was also raised that having to rely on food waste apps doesn't address the root of a 'socially acceptable' shop.

Once the index is finalised (after incorporating child presence and validating risk zones), it will be tested in communities. The goal is for it to inform policy and decision-making quickly and effectively, and the team is optimistic that councils and departments will respond because of current momentum post-COVID and targeted funding from government.

Panel Discussion (2)

Panel members were very struck by the number of areas in Northern Ireland appearing as 'red' or 'orange' within the food insecurity map (i.e. areas with high food insecurity). While Dr Furey did stress that the version they were seeing was very

‘zoomed’ out, and zooming in would make visible the greater numbers of variations within these geographic areas, it still led to a conversation around stigma, and how the map could be used with and within communities without playing into concerns around stigma. It was raised by one member, and concurred by several others, that in looking at a map like that, some communities might feel that they were being stigmatised or might feel that a ‘disadvantage’ of data-sharing could be that they would ‘lose out’ if some of the changes made were perceived by them to be negative. This connected back to the discussions around overlaying survey data and going door-to-door, which may address these issues. It also connects to the previous discussion around the importance of involving people with lived experience.

It was raised that the common practice of people crossing the border to do their weekly shop where it might be cheaper is not captured within the map, again highlighting the importance of speaking directly with people to help contextualise the data, and emphasising that, while powerful, admin data does not capture every aspect of a given issue.

In terms of the data and the research, Panel members inquired about potentially overlaying the current data for the food poverty index with supermarket food waste to address access to food and reduce food waste. There was also a consensus amongst the Panel that they would like to see the food insecurity data overlaid with other indices, such as health, to gain a more detailed picture of the problem. Linked to this is how things like free school meals and transport links (to access supermarkets) played a role here, which could potentially be addressed with further data linkage.

Panel members were interested in potential future and existing interventions. There were discussions about tech interventions, such as apps that direct people to supermarkets with food about to go ‘off’. However, as mentioned within the context of the food poverty presentation, food apps not considered ‘socially acceptable’ way to access food, and in this context the Panel felt these types of solutions could assist in

the short term but are not generally long-term food poverty solutions. They also discussed things like cooking classes to teach people to cook and know more about food, and that this could potentially bridge some of the issues. There was also broader discussion around 'social supermarkets' as related to but different from food banks, and how these might help to address food insecurity in places identified by the index.

The Panel also felt that public awareness plays a key role in poverty alleviation, and accurate numbers and measurements – including such innovations as the food poverty index - assist this.

Deliberation (3)

After both expert presentations, Panellists participated in a Knowledge Safari to facilitate deliberation on four questions:

1. How do you feel about your data that relates to poverty being used by researchers to inform policy and practice? Do you have any concerns about using your data in this way?
2. Are there some data sources you are more comfortable sharing than others?
3. Do you prefer this research to be completed by academic or governmental researchers?
4. Are there other issues around food poverty or poverty generally you would like us to explore?

Question 1: How do you feel about your data that relates to poverty being used by researchers to inform policy and practice? Do you have any concerns about using your data in this way?

- **Data Anonymity and Security:**

Panel members emphasized the importance of de-identifying data to protect personal information. This was recalled from previous Data Dialogues.

Members were not supportive of identifiable data being used in the circumstances described by the day's presentations.

- **Transparency and Access Control:**

Linking to the point above, there was a strong preference for knowing who access the data and for what purpose, and a feeling that access should be limited to approved individuals only. As came out in Question 2, there are some sensitivities around specific topics, so the importance of transparency, security and clarity of purpose around data – particularly emphasising public good – was clearly evident in the discussion.

- **Informed Consent and Education:**

Participants also suggested incorporating an educational component to help individuals make informed choices about data sharing. The need for informed consent was highlighted, and an emphasis placed on transparency in how data is collected and used. An opt-out system was also suggested. While this suggestion wasn't widespread, it is important to note and potentially pick up in later conversations with the pattern.

- **Communication of Benefits and Risks:**

Clear communication about the potential benefits and risks of data use is essential to build trust and encourage participation. This was also linked to education and transparency for members.

- **Value of Data Use:**

There is a shared sentiment that not using the data to inform decisions and improve society would be more frustrating than its use, indicating a positive attitude toward responsible data utilisation. It was felt that researchers should have access to de-identified data to investigate key issues like poverty.

Overall on Question 1, the Panel felt that data-sharing is beneficial, but that security and transparency are very important in Members' comfort levels, and that there needs to be a weighty consideration of public benefit in data access, as well as concerted efforts to 'educate' publics on data-sharing.

Question 2: Do you have any concerns about using your data in this way? Are there some data sources you are more comfortable sharing than others?

There was, however, a general comfort with anonymised data. Most participants expressed no major concerns as long as the data is anonymised and cannot be traced back to individuals. There was, however, a suggestion that optional identifiability—with explicit consent—could help humanise the data and better represent lived experiences. This could also be achieved in partnership with community groups.

- **Privacy and Public Use:**

If any data is to be made public, clear privacy notices must be provided to ensure participants are fully informed. It was acknowledged however that this was unlikely to be necessary when using de-identified data.

- **Transparency and Purpose:**

There is a strong desire for transparency about the objectives behind data use, which is seen as essential for building trust. While some felt that willingness to see data used might depend on the topic, others felt that with de-identified data it wouldn't matter.

- **Topic-Specific Sensitivities:**

From the discussions it was clear that comfort levels vary depending on the type of data. However, it was also noted that this would be subject to individual perceptions, and a question was raised about how to help navigate different sensitivities.

Topics that raise more privacy concerns include:

- Family
- Mental health
- Education
- Relationships
- Convictions

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- Location
 - Career
 - Safety

Question 3: Do you have any concerns about using your data in this way? Are there some data sources you are more comfortable sharing than others? (continued).

- **Need for Education:**

An educational component is recommended to help individuals understand how their data will be used and to address concerns, as well as emphasising the de-identified nature of data being used in these examples.

- **Incentives for Participation:**

The Panel felt that, in the case of hesitancy of data-sharing, offering incentives may increase willingness to share data, especially for more sensitive topics. They also linked this to education efforts that would not only address safety and security, but look at the benefit of data being shared.

There were echoes of Question 1 in this topic, with the emphasis on transparency and the need for data literacy education, but it also highlighted specific areas where participants feel there may be increased public sensitivities around data-sharing and how specific efforts and interventions could help support data-sharing.

Question 4: Do you have a preference for this research to be completed by academic or governmental researchers?

- **Strong Preference for Academic Researchers:**

Participants generally prefer that research be led by academic institutions, valuing their perceived independence and objectivity. This also came up in previous discussions where some Panel members expressed concern that government and government researchers might be tied to political interests (see below).

- **Government Involvement with Caution:**

While government involvement is acceptable and necessary to enact policy or legislation based on research evidence, it should be supportive rather than directive. The research must remain free from political bias and independence must be protected alongside the publication of independent results.

- **Importance of Independence and Integrity:**

There is a strong emphasis on independent research driven by facts, particularly health and safety, rather than political agendas or opinions (“science not opinion”).

- **Need for Clarification on Roles:**

Some participants requested clarification on what is meant by “government researchers”, specifically whether this refers to civil servants or other entities such as consultants commissioned by government to engage in research.

- **Collaborative Approach Encouraged:**

The Panel identified a collaborative model involving both academia and government as beneficial, provided that data security and research integrity are maintained. This could be seen as positive for these types of initiatives that already exist.

- **Diverse and Representative Sampling:**

Researchers should be provided with samples from different areas to ensure the research is inclusive and representative.

- **Secure Data Environment Assumed:**

The assumption of a secure data environment is critical to building trust in both academic and governmental research efforts. This is linked to previous questions that clearly surfaced the need for safety and security around data in order to support linkage.

Question 5: Are there other issues around food poverty or poverty generally you would like us to explore?

Throughout the day a number of issues arose that the Panel felt were worth of further investigation and consideration by researchers in the field:

- **Mental Health:**

Panel members strongly identified with conversations around the link between mental health with well-being, as well as with food poverty and choices. Depression and poor mental health can negatively influence dietary habits, creating a cycle of poor health outcomes. Members were interested in this link between mental health poverty and food poverty.

- **Stigma, Shame, and Pride:**

Panel members also strongly felt that shame and pride are significant barriers to seeking help. The stigma of poverty can prevent individuals from accessing support, even when needed. They felt there was a need for further work in this area, potentially involving policy.

- **Challenges for the Employed:**

There is concern about working individuals who still experience poverty and/or food poverty, highlighting gaps in support systems for those not traditionally seen as vulnerable. This particularly concerned Members during discussions around absolute vs relative poverty.

- **Educational Gaps:**

There is a need for better education, especially for students, on the relationship between diet and mental health, which is currently under-addressed.

- **Societal Assumptions and Pressures:**

Social perceptions and assumptions about poverty can lead to isolation and reinforce negative stereotypes, worsening the experience of those affected. Members linked this to the point above around mental health and poverty.

- **Terminology Sensitivity:**

The term “poverty” is viewed by some as emotive or unhelpful. There is a call for more accurate and less stigmatizing language. Members had also raised concerns around ‘putting too many nouns before the word poverty’ and how this impacts discourse.

- **Beyond Financial Poverty:**

Poverty is not only about money. Social isolation and lack of access to community resources are also critical dimensions that need attention.

- **Access to Green Spaces:** Limited access to green spaces is seen as a contributing factor to poor mental health and reduced quality of life for those in poverty.

- **Referral Systems:**

There is debate over whether referrals for support should be voluntary or systematic, suggesting a need for clearer, more effective pathways to support programmes.

- **Feedback and Responsiveness:**

Participants emphasised the importance of timely feedback and review of support programs to ensure they are responsive and effective.

Conclusion

There is broad support for the use of data for linkage to research poverty. While there are some sensitivities within specific areas, Panellists generally felt that where data is de-identified and being accessed for a specific, transparent purpose which is beneficial to society, this was acceptable and even desirable, because they also expressed frustration at the amount of data being collected, held, and *not* used for research to improve our understanding of poverty and ultimately, improve people’s lives. These discussions and findings should provide some confidence to data custodians, policymakers and researchers that, within certain conditions and in

conversation with communities and people with lived experience, there is public support for linking administrative data to research poverty.

This topic and its deliberation were brought to the panel by the Administrative Data Research Centre Northern Ireland (ADRCNI). The presenters were Dr Aideen Maguire, Queens University Belfast, and Dr Sinéad Furey Ulster University.