Food access: provisioning practices in the remote communities of the Eilean Siar (Scottish Western Isles)

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Background: the national study
- Putting remote food retail in context
  - Scottish food retail map
  - Healthy food: availability and price

Findings
- Consumer perceptions of remote retail provision
  - Store differences
- Shopping decisions
  - Where (location, convenience, routines)
  - When (transport, delivery)
  - What (in store choice, quality)

Alternative ‘retail’ food networks

Conclusions
Scottish food policy

VISION

‘Communities across Scotland will enjoy better access to affordable, safe, healthy and fresh seasonal produce’ (2008:p9)
Background: a question of access

• Food access? (NCH, 2004, DEFRA 2008)
  – Physical access and economic access
  – Issues of population diversity, distance and deprivation.


‘access is a more accurate and less misleading concept when it comes to highlighting food inequalities’

Our combined focus on retail competition and consumer choice shifts the emphasis from changing patterns of retail provision towards a more qualitative understanding of how ‘choice’ is actually experienced by consumers.
Remote retail


• Relative rurality and availability (McEachern and Warnaby 2006).


• The community shop as support network (Smith and Sparks, 2000, Paddison and Calderwood 2007, Scarpello et al 2009).

‘Remoteness’ refers to the relative geographical isolation from major retail centres on the mainland.

‘Vicious’ model of rural retailing.

Retail provision relates to retail structure, retail density and distance from competitors.
Scottish national survey

Key questions:
– Within Scotland, are there significant differences in the accessibility to affordable sources of healthy food?
– If differences exist, are they linked to the social dimensions of affluence-deprivation and urbanism-rurality

Objective:
To provide an objective and systematic evaluation of access in terms of availability and affordability of a selected range of healthy foods

Research funded by FSAS and undertaken between 2005 and 2007
Two building blocks needed prior to the research design

a database of stores selling food
  – no accurate data base existed so one had to be developed
  – this could be mapped so providing a Food Map of Scotland
a list of indicative healthy foods
  – previous studies had baskets including healthy items but none had a suitable basket for the current research

Research design

data collection in survey areas (sentinels) in which retail provision of healthy food basket would be surveyed for availability and price

statistical analysis to test if indicators of affluence/deprivation or urbanism/rurality were related to availability and price of the basket and its indicator food items
A database of **5923** food shops was compiled from a range of sources and mapped.

Approximately 250,000 people live more than 10km from a large/medium sized food store.

Approximately 3 million people live less than 1km from a large/medium sized food store.
<table>
<thead>
<tr>
<th>Sentinel ID</th>
<th>Median SEUR</th>
<th>Median SIMD</th>
<th>General food shops</th>
<th>Specialist food shops</th>
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</thead>
<tbody>
<tr>
<td>IS1</td>
<td>remote rural</td>
<td>7</td>
<td>44</td>
<td>16</td>
</tr>
<tr>
<td>IS2</td>
<td>remote rural</td>
<td>4</td>
<td>30</td>
<td>12</td>
</tr>
<tr>
<td>RA1</td>
<td>accessible rural</td>
<td>3</td>
<td>28</td>
<td>34</td>
</tr>
<tr>
<td>RD1</td>
<td>remote rural</td>
<td>6</td>
<td>15</td>
<td>4</td>
</tr>
<tr>
<td>ST1</td>
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<td>7</td>
<td>20</td>
<td>12</td>
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<td>ST2</td>
<td>accessible small town</td>
<td>2</td>
<td>14</td>
<td>10</td>
</tr>
<tr>
<td>UR1</td>
<td>Large urban</td>
<td>2</td>
<td>19</td>
<td>16</td>
</tr>
<tr>
<td>UR2</td>
<td>Large urban</td>
<td>9</td>
<td>91</td>
<td>18</td>
</tr>
<tr>
<td>UR3</td>
<td>Other urban</td>
<td>4</td>
<td>49</td>
<td>19</td>
</tr>
</tbody>
</table>

The HEISB list comprised 35 items divided into 5 food groups with a different number of items in each group and an additional ready meal:

- Fruit and vegetables: 17
- Carbohydrate rich: 9
- Protein rich: 4
- Dairy: 3
- Fatty/oily foods: 1
- Ready meal: 1
• Contains only food deemed to be ‘healthy’
• Number of items limited so that basket is a viable survey tool
• Items selected by reference to nutritional factors, convenience, non-premium pricing and characteristic of Scottish diet
• Contains foods from main food groups
• 35 items finally selected for inclusion
• Items deemed as indicators so close substitutes allowed, e.g. on pack size

Table 3: Median price (pence) of food items in HEISB by size of general food store

<table>
<thead>
<tr>
<th>Food Items</th>
<th>General Food Stores</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Small</td>
</tr>
<tr>
<td>FRUIT</td>
<td></td>
</tr>
<tr>
<td>Orange juice</td>
<td>85</td>
</tr>
<tr>
<td>Bananas</td>
<td>189</td>
</tr>
<tr>
<td>Pineapple</td>
<td>53</td>
</tr>
<tr>
<td>Apples</td>
<td>135</td>
</tr>
<tr>
<td>Oranges</td>
<td>29</td>
</tr>
<tr>
<td>White grapes</td>
<td>311</td>
</tr>
<tr>
<td>Frozen berries</td>
<td>241</td>
</tr>
<tr>
<td>VEGETABLES</td>
<td></td>
</tr>
<tr>
<td>Baked beans</td>
<td>49</td>
</tr>
<tr>
<td>Frozen peas</td>
<td>178</td>
</tr>
<tr>
<td>Carrots</td>
<td>178</td>
</tr>
<tr>
<td>Tomatoes</td>
<td>79</td>
</tr>
<tr>
<td>Onions</td>
<td>187</td>
</tr>
<tr>
<td>Round lettuce</td>
<td>58</td>
</tr>
<tr>
<td>Broccoli</td>
<td>232</td>
</tr>
<tr>
<td>Cucumber</td>
<td>29</td>
</tr>
<tr>
<td>Red pepper</td>
<td>369</td>
</tr>
<tr>
<td>Sweetcorn</td>
<td>52</td>
</tr>
<tr>
<td>CARBOHYDRATES</td>
<td></td>
</tr>
<tr>
<td>Wheatloaf</td>
<td>170</td>
</tr>
<tr>
<td>Oats</td>
<td>169</td>
</tr>
<tr>
<td>Spaghetti</td>
<td>69</td>
</tr>
<tr>
<td>White rice</td>
<td>75</td>
</tr>
<tr>
<td>Brown rice</td>
<td>92</td>
</tr>
<tr>
<td>Brown rolls</td>
<td>120</td>
</tr>
<tr>
<td>Wholemeal bread</td>
<td>99</td>
</tr>
<tr>
<td>Oven chips</td>
<td>129</td>
</tr>
<tr>
<td>Potatoes</td>
<td>50</td>
</tr>
<tr>
<td>MEALS</td>
<td></td>
</tr>
<tr>
<td>Birds eye lasagne</td>
<td>189</td>
</tr>
<tr>
<td>PROTEIN</td>
<td></td>
</tr>
<tr>
<td>Lean beef mince</td>
<td>269</td>
</tr>
<tr>
<td>Haddock fillets</td>
<td>249</td>
</tr>
<tr>
<td>Chicken breasts</td>
<td>180</td>
</tr>
<tr>
<td>Salmon fillets</td>
<td>279</td>
</tr>
<tr>
<td>DAIRY</td>
<td></td>
</tr>
<tr>
<td>Semi-skimmed milk</td>
<td>75</td>
</tr>
<tr>
<td>Low fat spread</td>
<td>124</td>
</tr>
<tr>
<td>Low fat yoghurt</td>
<td>57</td>
</tr>
<tr>
<td>Skimmed milk</td>
<td>70</td>
</tr>
<tr>
<td>HEISB TOTAL</td>
<td>4782</td>
</tr>
</tbody>
</table>
National findings - Availability

• Large stores and some medium sized stores had the full range of HEISB items
• Small stores generally stocked about half the items
• Fruit and carbohydrate group items were normally more available than vegetable group
• Protein group items were less available in more deprived areas
• Total number of items per shop was weakly negatively correlated with deprivation but more deprived areas had a higher density of small shops
• A good range (>50% in each of 5 product groups) in 61 of 268 small general food stores. These usually were in rural areas.
National findings - Price

• There was a considerable range of price for HEISB items and the baskets across stores and sentinels.
• Average price for HEISB basket in large stores was £37.48, in medium stores £40.30 and in small stores £47.83.
• Average price in urban sentinels was lower than in rural sentinels.
• In general prices rise with deprivation BUT prices were lowest in the most deprived areas.
• Affluent sentinels were generally associated with lower prices.
• The 3 sentinels with significant deprived element had the three highest prices.

<table>
<thead>
<tr>
<th>Sentinel ID</th>
<th>UR2</th>
<th>URI</th>
<th>UR3</th>
<th>ST1</th>
<th>ST2</th>
<th>RD1</th>
<th>RA1</th>
<th>IS2</th>
<th>IS1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sentinel</td>
<td>Urban</td>
<td>Urban</td>
<td>Urban</td>
<td>Small</td>
<td>Small</td>
<td>Rural</td>
<td>Rural</td>
<td>Island</td>
<td>Island</td>
</tr>
<tr>
<td>Environment</td>
<td>D</td>
<td>A</td>
<td>M</td>
<td>town D</td>
<td>town A</td>
<td>D</td>
<td>A</td>
<td>M</td>
<td>M/D</td>
</tr>
<tr>
<td>HEISB TOTAL</td>
<td>4387</td>
<td>4360</td>
<td>4511</td>
<td>4725</td>
<td>4234*</td>
<td>5275</td>
<td>4668</td>
<td>4341</td>
<td>4918</td>
</tr>
</tbody>
</table>

D=deprived; M=mixed; A=affluent; * price average across two locations.
Focusing on Remote Access

Research details

http://www.food.gov.uk/science/research/devolvedadmins/scotlandresearch/scotlandresearch/ScotlandProjectList/s04005/

<table>
<thead>
<tr>
<th>Northern Western Isles</th>
<th>Population</th>
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<tbody>
<tr>
<td>Lewis</td>
<td>18252</td>
</tr>
<tr>
<td>Harris</td>
<td>1662</td>
</tr>
<tr>
<td>Great Bernera</td>
<td>233</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Southern Western Isles</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vatersay</td>
<td>94</td>
</tr>
<tr>
<td>Barra</td>
<td>1078</td>
</tr>
<tr>
<td>Eriskay</td>
<td>133</td>
</tr>
<tr>
<td>South Uist</td>
<td>1818</td>
</tr>
<tr>
<td>Benbecula</td>
<td>1249</td>
</tr>
<tr>
<td>North Uist</td>
<td>132</td>
</tr>
<tr>
<td>Berneray</td>
<td>136</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>24,787</strong></td>
</tr>
</tbody>
</table>
Remote Access Study

• To look at how food access impacts on food choices in remote island communities off the West coast of Scotland.

• Specific objectives included
  – To explore how food access impacts on consumers food shopping choices (specifically low income households);
  – To describe consumer coping mechanisms used to deal with food access issues

• Studentship Funded by Food Standards Agency Scotland Award S40045
Western Isles: main roads, retail food store type and location
Retail Food Provision

60 food stores spread throughout the islands

1 Large Multiple
4 Medium general food stores (1 independent)
39 small general stores
16 specialist stores (inc. butchers, bakers, fishmongers)

http://www.youtube.com/watch?v=496oNVE6u68
Data collection

PHASE 1 (October 2006)
Southern Western Isles - n=30
(Berneray, North Uist, Benbecula, South Uist, Eriskay, Barra)

- <35yrs: 5
- 36-49 yrs: 7
- 50-65 yrs: 12
- 66+: 6

PHASE 2 (April 2007)
Northern Western Isles - n=26
(Lewis, Harris)

- < 26-35 yrs: 5
- 36-49 yrs: 11
- 50-65 yrs: 3
- 66+: 7

• Methods
  – Individual Interview (n=56)
  – Shopping Diary (n=41)

• Snowball recruitment
The retail landscape

• North/ South differences
  – Only one large supermarket located in North
  – Deliveries to stores 3x per week in South and daily to large/ med supermarket in North (except Sunday)
  – Mean shopping occasions North = 4.35, South = 5.10
  – Main shopping day
    – North: 40% on Friday
    – South: 25% on Wednesday

• Influenced by the choice of stores available in area reasonably accessible to participants
  – Definition of reasonable distance
    – (51% of the population in Eilean Siar had to travel in excess of 10km, 22% have to travel over 25km to a large or medium size general store (Dawson et al, 2008)

• Key criteria- store format, size, ownership
“Eh if it was all, well I mean I use the local shop quite a bit anyway I think, you know... cos I do think you, you should support other wise you won’t have it anymore you know use it or loose it sort of thing.  I’d probably still go elsewhere, just for a, you know, just for a bit of variety just to see you know what was available” (Female, aged 50-65, Islander, South)

“But we support the local shops during the week. We feel we’ve got to, and they can’t compete with supermarkets. It’s as simple as that. But when you’ve buying bulk like us, it would cost us a fortune to be buying everything from the local shops, but at the same time we support them during the week.” (Female, aged 66+, Islander, North)

“A community shop like they have in Uig. I think it’s fabulous. I know I can go down there in, what, 40 minutes or something and shop down there and get anything – lemons, limes, aubergines, you know, really unusual things. Here you’re getting the very basics – tea, sugar, milk, lots of tins, lots of pot noodles.” (Female, aged 50-65, Incomer, North)

http://www.communityretailing.co.uk/our-members/uig-co-op.html
Where: physical location, convenience and routines

“so it’s easy for me to call in, pick up just a few bits I need and then pick up (Baby daughter) on the way home. Rather than pick up (Daughter), take her to the shop and... We’ll be forever in the shop with this one!” (Female, aged 26-35, Islander).

“it would be part of another trip not specifically to shop because its 25 miles round trip not quite it’s probably about 20 miles there and 20 miles back and that’s a lot of petrol and petrol is extremely expensive here”(Female, aged 66+, Incomer, South)

“I can do yeh but that’s not so easy because I can’t get the bus at the door because it’s a limited service on a Saturday so I have to walk out to the end of the road you know where you came in ... it’s not that far but when your carrying bags back it’s quite a distance— your arms get longer it’s just the weight. That’s why when I’m in college I might go into town and I might do the butcher one day or I might take a wee trip into [XXX] or [chemist] or whatever, do it that way” (Female, aged 36-49, Islander)

Consumers without access to a car are often identified as in the ‘at risk’ members of the community in terms of food access (Furey et al, 2001).
“…it's usually three days a week you get bread and milk like in the summer it's Tuesday, Thursday and Saturday and then it changes over to Monday, Wednesday and Friday in the winter you don’t go that morning you’ve had it, you don’t get bread and milk” (Female, aged 36-49, Islander)

“But it’s still a good service. I think, specifically, [store owner] shop, it’s good. It’s good veg. It’s a daily run. If you go in there first thing in the morning it’s empty. You’ve got to wait until he comes back from town, and it’s just kind of, you’re safe in the knowledge that it is, its fresh stuff he’s bringing back. It’s as simple as that...So, it’s a good service I think.” (Male, aged 26-35, Islander)
“if you go up to Uist and you go to the [store] there, you can take a breakfast cereal here there’ll be maybe one variety in a smallish pack and if you go to a larger co-op they’ll have that variety and perhaps they’ll be another two or three flavours in the same range and much bigger packs as well. We get a cereal here called country crisp in strawberry but in Uist they get it in strawberry, raspberry em I think its fruit and nut or fruits of the forest or something there’s four anyway…. I came back from Tesco with a load of them, everything except strawberry because we’re sick to death with strawberry and it’s all you can buy down here.” (Female, 50-65, Incomer)
“Bananas are always poor quality here, they’re always old and bruised I find and if they look nice they won’t have that nice fresh fruit flavour that bananas hopefully should have. I suppose that’s transport there are problems with transport so food has got to be a bit more expensive and a bit older if it’s coming all the way from the mainland I suppose. Em I don’t like having to buy bags of apples when one or two of the apples in the bag are obviously bad and I’ve had that happen, especially in the smaller shops not so much in the [xxx] or you know you buy a pack of tomatoes and one of the tomatoes is all mouldy round the back I mean these things happen a lot I think the [xxx] try to sell things off cheap in the afternoon if they’ve reached their sell by date but they seem to go mouldy and bad long before their sell by date sometimes …..” (Female, aged 50-65, Incomer, South)
Alternative ‘retail’ food networks

• Local Producers Sales
• Buying direct from producer
• Producing or growing your own
• Hunting/ Gathering/ Fishing Locally
• Sharing/ Gifting Food
• Barter

“I think that’s the fabulous thing about living in an environment like this, is that you have access to the best quality food. You have fabulous butchers that have really fresh meat, you have venison that’s coming straight off the hills, you have lambs that are fresh and local, you have fish that is just caught by all the fishermen and I think that’s part of the beauty of living somewhere like this, is that you have access to such beautiful food.” (Female, aged 26-35, Islander)
Remote food access

**Shopping trip**
- out-shopping
  - supermkt
  - chain
  - independent
  - mobile van
  - community

**Non retail**
- AFN
  - producer sale
  - GYO/barter
  - gift

**Store type**

**Access issues**

**Physical location** (where/when)
- Convenience
- Daily routine
- Shopping trip

**Retail store format** (where/what)
- Store management
- Product range/stock
- Prices
- Quality
- Service

**Transport** (when)
- Delivery schedules

**Economic** (where/when/what)
- Household finances
- Local business

**Community** (where/when/what)
- Local produce/ seasonality
- Tacit knowledge
Conclusions

• There is evidence to support the claim about disparity in terms of food provision (McKie et al 1996, Furey et al 2001) but individual access is complex and islanders have adapted their behaviour and developed coping strategies to address the issues of irregular supply and limited choice.

• Decisions on where to shop for food depend on more than store location and price reflecting the nature of the shopping trip, alternative sources, and the individual service provided.

• While access to a large supermarket and ‘outshopping’ offers more choice and better prices local shops and producers play an important role in the community. Individual retail initiatives can provide flexibility in ordering, delivery and supply of produce to islanders increasing options in terms of product variety, quality and convenience.

• A number of islanders have devised ways to overcome these disparities that utilise alternative food networks and draw on household and community networks to increase their choice. Examples include growing food, keeping livestock for produce that can be consumed or bartered. In this way food becomes embedded in household and community life.

• Both existing food retail and AFN’s co-exist as a solution to food access challenges in remote communities.
Supermarkets undoubtedly improve availability and affordability of healthy foods but in remote communities local stores remain an important part of the retail landscape both in providing a basic level of food provision and as a focal point for the community, best exemplified in the community food store. There is still scope for improved access to healthy food in remote communities but we need to understand the complexity of food provisioning in these communities and to recognise their resourcefulness and ability to adapt to the challenges of living in more remote locations. Food provisioning remains embedded in tradition and both modern and alternative food networks successfully co-exist in these island communities.
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