Final Report: Exploring the role of marketing as a tool to aid smart meter adoption amongst fuel poverty and vulnerable groups

Authors: Julie Lewis and Julie Rosborough

The Nottingham Trent University

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Background

The role of marketing

This study is concerned with exploring the role of marketing as a tool to improve smart meter adoption amongst different fuel poverty groups. The traditional view of marketing is that it is a process by which people and firms get what they require and desire by generating and trading value with others (Kotler and Armstrong, 2010). Nonetheless, a more recent view of marketing is that it provides a vehicle to aid the achievement of a wide range of social goals. In this instance, fuel poverty and energy efficiency. For example, social marketing could be used as a means of 'engaging' fuel poverty groups to improve the energy efficiency of their home. Despite this, few empirical studies have explored the role of marketing in alleviating fuel poverty and improving energy efficiency.

Smart meters

The focus of this study is smart meters as a review of the literature reveals that

"the Government's vision is for every home in Great Britain to have smart energy meters, giving people far better information about, and control over, their energy consumption than today." (www.DECC.gov.uk)

Furthermore, it is claimed customer engagement is an antecedent of every home in Great Britain having a smart meter (www.DECC.gov.uk). Customers have to give their permission for energy companies to install smart meters in their home. Moreover, customers have to be at home while their smart meter is being installed. To put it another way, customers have to open the door of their home and welcome energy companies in. Yet, pilot discussions with an energy company suggest low customer engagement towards smart meters during early installation trials. Low interest in smart meters means customers are unlikely to open the door of their home and welcome energy companies in. Consequently, energy companies can not fit smart meters. As such, the benefits associated with smart meters, such as increasing energy efficiency and reducing fuel poverty, may not be available to all consumers.

Nonetheless, as aforementioned, marketing might offer a tool to increase customer engagement. That is to say as a way of emphasising the benefits associated with smart meters while minimising the costs, from a consumer perspective. In spite of this, there is a lack of academic and practitioner literature which explores the role of marketing to improve smart meter adoption.

Different fuel poverty groups

The rationale for the focus on fuel poverty groups is that, if smart meters offer the means to alleviate fuel poverty and increase energy efficiency, then these groups will have the greatest benefit. However, low income groups are typically the hardest to communicate to, thus engage. Furthermore, they tend to be neglected by organisations in favour of high income groups (www.marketingweek.co.uk). Research which explores the perceived benefits and costs of smart meters to fuel poverty groups will help better

understand how to engage these groups with smart meters. Ultimately, to help them reduce their fuel poverty and increase energy efficiency.

Specifically, the research will explore the role of marketing to improve smart meter adoption amongst different fuel poverty groups, namely, elderly and young families. This is because these different groups may have different perceived benefits and costs. Subsequently the role of marketing may differ by group. The context of the study will be Nottingham.

Further research was conducted with an Energy Sector senior manager working on Smart Metering delivery to help set the research in context.

Research aim and objectives

The research aims are as follows:

1. To understand the perceived costs and benefits of smart meters amongst fuel poverty groups behaviour towards smart meters
2. To explore how these behaviours vary by fuel poverty groups (e.g. elderly and young families)
3. To make marketing recommendations to improve smart meter adoption amongst different fuel poverty groups

Methodology

To date, a total of nine semi-structured interviews were conducted with fuel poor and vulnerable individuals, who had not yet had a smart meter fitted in their home. Convenience and snowball sampling was used to identify these individuals and, many respondents were classed as vulnerable on multiple criteria. Criteria for vulnerability include:

- the presence of people aged over 65 in the household
- the presence of children aged under 16 in the household
- a household income of less than £10,000 per annum
- receipt of means tested benefits

The following table, 1.0, provides information about which individuals were interviewed, including age range, number of people in household and housing stock.

Table 1.0. Individuals interviewed

Respondent	Gender	Age (years)	Housing stock	Number of people in household and relationship
1	Female	61 – 70	Owner occupied (ex. council property)	2 = respondent and husband (61 – 70 years old)
2	Female	26 – 30	Private rented	2 = respondent and son (under 16 years old)
3	Female	26 – 30	Nottingham City Homes rented house	3 = respondent and two children (both under 16 years old)
4	Female	35 – 40	Private rented	3 = respondent and two children (both under 16 years old)
5	Male	41 – 50	Owner occupied	3 = respondent and mother and father (both 71 – 80 years old)
6	Female	80+	Broxtowe Borough local authority rented house	1 = respondent
7 *	Female	21-25	Nottingham City Council rented house	3 = respondent, partner and child of 11 months
8*	Female	21-25	Nottingham City Council rented house	6 = respondent, partner and four children under 7 years old
9*	Female	21-25	House owned by parents	8, respondent, parents, 4 siblings and respondents own child of 2 years
10**	Female	77	Owner Occupied	1 = respondent
11**	Female	79	Owner Occupied	2 = respondent and husband (80+)
12**	Male	79	Private Rented	1 = respondent
13	Female	35-40	Head of Smart Metering EON	1 = respondent

*interviewed at a Sure Start centre, **interviewed at an Age UK drop in centre

Interviews with respondents typically lasted between 30 – 60 minutes. All interviews were conducted face-to-face either in the respondents home or in a café and were recorded with the exception of two. While attempts were made to record these interviews the respondent did not want the interview to be tape recorded, nonetheless, the interviewer did make handwritten notes during the interview.

The interviews explored general themes, including how warm respondents kept their house, if it is a struggle or easy to keep their house warm, and, how efficiently these individuals used energy. More specifically then, the interviews also explored respondents awareness and understanding of smart meters, benefits and drawbacks associated with smart meters, and, respondents needs for further communication to aid smart meter adoption. All respondents were asked the same questions and a full list of interview questions is provided in appendix one. Furthermore, the first phase of interviews were conducted between 16th and 27th November, 2012, the second phase on 21st December, 2012 and a final phase will be completed in January 2013.

A further interview with an Energy Supplier stakeholder was also conducted. This interview provided an opportunity to explore the context within which the Smart Metering programme and understand the perceived customer benefits from the perspective of the energy companies. In addition, three interviews with elderly respondents were undertaken at the Sure Start centre. During one of these interviews one of the respondent's carers provided some useful insight into how elderly people used energy. This discussion was not part of the formal interview process but provided useful anecdotal evidence.

Limitations of the study

- The nature of the topic was sensitive and both researchers were concerned about how open respondents were with them.
- The early stage of the smart metering programme meant that respondents were unfamiliar with the concept and this may have limited the discussion.

Preliminary findings – Fuel Poverty respondents

Keeping the house warm

Out of all of the respondents only two said that they kept their whole house warm throughout the year. All of the other respondents commented that they didn't keep their whole house warm throughout the year due to cost. For instance, when asking one respondent if she kept her whole house warm throughout the year she remarked no and explained this was since:

> *"Financially* (it's) *very difficult. I don't work at the minute, so I'm on benefit and…yeah, energy is too pricey. So yeah…sometimes at night I turn my thermostat down to zero and then my house will be freezing overnight and we'll get up and we're still cold. I can't afford to keep it at 21"* (Respondent 3)

However, in the main, there was a generational gap between respondents in terms of the extent to which they felt keeping their home warm was a struggle. For instance, the two respondents aged over 60 years old felt that while it was difficult to keep their house warm it was less of a challenge than historically when, in the words of one respondent:

> *"…we just had a coal fire and no double glazing"* (Respondent 1)

In many cases, even when older respondents could afford, and needed, to have the heating on they did not. For example, according to one carer of elderly people, many of the older people she cared for lived in homes were the lack of heating could have potential serious consequences for their health. Even with her encouragement to increase the level of heating in their homes many of the people in her care refused to because of their frugal upbringing and 'war mentality'.

All of the respondents said that they tried to keep warm by means other than turning on the heating, including putting on extra clothes. Five respondents, mainly single mothers, commented that they went to other places, including friends and relatives homes, local shopping centres and community groups to keep warm. Furthermore, one respondent commented that she left the oven door open after cooking to warm the kitchen:

> *"Because my kitchen's really cold; it's very, very breezy in my kitchen, so…I leave the oven open as well once I've finished using that…if I've been doing some cooking, I'll leave the oven open"* (Respondent 2)

In addition, some of the younger parents interviewed at the Surestart scheme, talked of using a condensing tumble dryer on in the kitchen to dry clothes because they were reluctant to put the heating on. One respondent said that she,

> "...*put the dryer on when I need to because the heat stays in"* (Respondent 7).

Another respondent mentioned that the kitchen was the only warm room in the house because the condenser tumble dryer was constantly on.

Energy efficiency and energy tariff awareness

All but one of the respondents felt they were very cautious about energy use, in terms of limiting the amount of time the central heating, hot water and gas fire were on. The one respondent who was not cautious about energy use was an elderly lady who lived alone in a private owner occupied house, and felt that having a warm comfortable house was very important to her wellbeing. On the other hand, as mentioned above were very concerned about the cost of energy usage. For instance, a respondent commented:

> *"I'm very careful with heating…because I think about the cost, you know"* (Respondent 6)

However, seven respondents were energy efficient from the perspective of having double glazing as well as cavity wall and loft insulation. Of these seven respondents, four had these measures (i.e. double glazing, loft/cavity wall insulation) implemented by their local authority and one by a private company (free of charge due to her being in receipt of means tested benefits). Two elderly owner occupied respondents had put these measures in at their own cost. Interestingly, the majority of respondents who did not have double glazing and cavity wall/loft insulation did want these measures in place but felt they had a lack of knowledge in this area and needed more information. Moreover, these respondents also felt that a major obstacle to implementing these energy saving measures was lack of landlord support. For instance, one respondent remarked that her landlord lived in Thailand and so she had to go through a letting agency to contact him which made it difficult to put in place these measures, including double glazing:

> *"…I go through a letting agent. So things like…I've said to them…'Look I've got single glazed windows, it's getting cold, it's more expensive for me' and stuff like that but then getting the actual things like that (i.e. double glazing) sorted out isn't going to be fast for me"* (Respondent 3)

Another respondent felt that her landlord, Nottingham City Homes (NCH), did not want to spend money implementing energy saving measures and therefore, they provided a lack of information to tenants:

> *"They* (NCH) *don't really want to give out their money, they don't want…I don't feel that they're* (NCH) *very helpful, they're not supportive…so I mean I've got another damp surveyor coming out tomorrow to talk about the fact that I get damp on this wall and I'm going to say it's solid wall insulation I need. And this women that I was talking to at my Auntie Joyce's said they* (NCH) *do have funds for that, they* (NCH) *were given government funds to do it but they* (NCH) *don't advertise it, they* (NCH) *don't want you to know"* (Respondent 3)

A number of respondents mentioned the Nottingham City Council updating their homes with new boilers and double glazing. Unfortunately the one respondent talked of how the person installing the double glazing had said that because of the damp in the walls, the double glazing would have little impact. This respondent felt that even with new energy efficient measures, her home was still cold and because of damp walls, any heat generated left her home quickly. Respondent 8 said that some of her rooms were so cold at night that due to concerns about the health of her six month old baby she kept him in her bedroom because the other bedrooms were too cold.

Unsurprisingly, those respondents living in homes without energy saving measures (i.e. double glazing, cavity wall insulation) faced the greatest difficulties keeping their house warm. This issue pervades the private rental, social housing, and owner occupied housing stock. However, in particular, single mothers appeared to live in the poorest quality housing stock. The themes mentioned above also suggests while many fuel poor individuals may want to have smart meters fitted a constraint may be lack of landlord engagement.

Finally, none of the respondents were aware of whether they had AAA rated appliances and some seemed unaware of the AAA rated categorisation and what it meant. Nevertheless, the majority of respondents were aware of who their energy company was and what tariff they were on. Indeed, several of the respondents were very savvy regarding what tariff they should, and were, on. For example, several younger respondents commented they were on a 'vulnerable' energy tariff, while older respondents remarked they were on an age concern tariff. However, some respondents mentioned the convenience of 'pay as you go' i.e. pre-payment tariff which is the most expensive way of paying for energy and seemed unaware of the higher costs associated with this tariff.

Awareness of smart meters

All of the respondents, apart from four had heard of the term 'smart meters'. However, none of the respondents had heard of IHD's. Moreover, while the majority of respondents had heard of smart meters, none of the respondents had a clear understanding of the technical details of how a smart meter and an IHD works. For instance, when asking one respondent if she had heard of the terms smart meters and IHD's she remarked:

> *"I have* (heard of them) *but ages ago…I don't know how they work and I don't know what you have to do with them"* (Respondent 1)

Furthermore, the majority of respondents couldn't remember where they had heard about smart meters and IHD's apart from one respondent who thought she had read about them in a leaflet which had come with one of her energy bills, but that she hadn't taken much notice of it. One respondent mentioned the British Gas smart meter campaign and had noticed both the television and direct mail activity.

Benefits associated with smart meters

After the interviewer had explained smart meters and IHD's to respondents all of the participants commented that even though they were energy conscious a major benefit associated with these devices was that they would enable them to even better monitor their energy usage and so, reduce their energy bills. The following remarks made by respondents demonstrate how they feel smart meters and IHD's might help them better use energy:

> *"At least you've got something there and you could go 'Oh it's running at 64%, let's see what I can switch off' and 'Oh look, it's reduced'* (Respondent 2)

> *"Well, it's the whole idea of monitoring how much I'm spending and then there's the opportunity to save as well…if I could monitor it and keep checks on it and then I could find new ways of saving money"* (Respondent 4)

Respondent 8, a mother of four young children, said that although she thought it was a good idea she wouldn't have time to look at it. However, most of the respondents were very clear that energy companies would have to demonstrate a major financial saving associated with smart meters and IHD's. For instance, one respondent remarked:

> *"…but they've* (the energy companies) *got to prove to you it's going to save money…that it's going to save you lots of money…but I mean if it's only going to save you coppers I don't know as if people will go for it…it'd have to have big* (financial) *benefits"* (Respondent 1)

In addition, older respondents felt that smart meters and IHD's offered the greatest benefits to large families, especially those with teenagers. For example, one respondent commented this was because teenagers tend to leave lights and the TV on and as such, having a smart meter might alter their behaviour:

> *"…I think families with…big families, it* (IHD's) *might help them as well, especially with teenagers leaving all the lights on and leaving music on and televisions on and things like that"* (Respondent 1)

One benefit mentioned by respondent 8 who already paid for her energy through a weekly payment card, thought that smart meters would give her greater visibility and allow her to budget. She explained:-

> "*Yeah, ..you'd be able to see quite regularly how much you're using …rather than wait for the bill to come through*"(Respondent 8)

Surprisingly, several respondents thought that smart meters offered the greatest benefit to single person households rather than multiple occupancy households. In other-words, these respondents felt that smart meters were similar to water meters and thus, those individuals who lived on their own and used the least energy would benefit the most. This suggests misconceptions exist regarding IHD's and smart meters.

Finally, two respondents (both younger single mums with children) viewed a major benefit to be that bills were no longer estimated since this would help avoid them getting into debt.

Drawbacks associated with smart meters

Every respondent explicitly stated that a significant constraint to them having an IHD and smart meter fitted would be the cost. That is, all of the respondents commented they wouldn't have a smart meter and IHD device fitted if they had to pay for them. For example, a respondent said:

> *"…I don't see that there'd be any negatives to it* (i.e. smart meters and IHD's), *so yeah, definitely* (I'd have them fitted) *as long as it's free"* (Respondent 3)

The majority of respondents also said that a drawback related to IHD's and smart meters was that they could see how much energy they were using, which might make them anxious about their energy bills and so, lower their energy usage. This might then have a negative impact on their overall quality of life. This point is illustrated in the following comments made by a respondent when asked about the downsides linked to smart meters and IHD's:

> *"Frightening people…frightening you I think because you'd see how much you was actually using and how much equipment does use"* (Respondent 1)

Several respondents were also concerned with how much energy the IHD and smart meter itself would use. For example, one respondent commented that she had been offered a smart meter and had declined it as she felt the IHD device itself used electricity:

> *"(*her granddaughter*) gave me one (*i.e. a smart meter*) and I didn't want it. I said 'What do I want that for, it's (i.e. the IHD) using electricity"* (Respondent 6)

Also, one respondent said he had concerns that smart meters/IHD's might generate incorrect meter readings and so, bills could be inaccurate. Moreover, the same respondent commented that he currently paid for his bills via a direct debit payment which was the same each month and as such, was worried that he might no longer be able to do this, that is, pay a different amount each month.

Surprisingly, none of the respondents felt that a barrier to having a smart meter and IHD fitted was letting the energy company in their home and being at home while these devices were fitted. Although three respondents said that they worked fixed work patterns (e.g. one respondent was a dinner lady) and could not take time off as and when they wanted to. Consequently, energy companies would have to be flexible to work around these set shifts, rather than respondents being in to suit the energy company. In addition, one respondent did comment that having someone in their home to fit a smart meter/IHD might be uncomfortable for elderly people.

Finally, while older respondents felt that the benefits related to smart meters outweighed the risks, ultimately they did not think they would have a smart meter and IHD installed. In essence, these respondents could not see a clear benefit to them (i.e. they were already very careful with their energy usage) and, importantly, they had an inertia against change. This is illustrated in the following observation made an older respondent:

> *"…I still don't know if* (respondents husband) *would have one* (i.e. smart meter and IHD) *fitted…to be honest he's a funny so and so…he doesn't like change"* (Respondent 1)

Marketing as a tool to aid smart meter adoption

A key theme to emerge from interviews with respondents was that there is a need for better communication about smart meters and IHD's, especially the technical operational details and benefits. This is demonstrated in the following remarks made by a respondent:

> "*There's got to be more publicity about it on the plus side (i.e. money it saves), they've got to advertise it a bit better…because if they want everybody to have one, then I think they've got to sell it a bit more haven't they?* " (Respondent 1)

Message

Respondents felt that, as prior discussed, the key message which would encourage them to have a smart meter and IHD installed is that these devices enable them to better use energy, reduce their energy bills and ultimately save money. For instance, a respondent observes:

> *"And the saving of money…because everybody wants to save money don't they? They want more money at the end of the month to spend on other things than energy"* (Respondent 1)

Marketing communication media

All of the respondents felt that the most effective way to tell people about smart meters and IHD's, in particular the benefits, was via TV and radio advertising as well as the Internet. Interestingly, the oldest respondent (80 plus years old) remarked she would prefer communication via the Internet rather than press advertising because she could no longer read newspapers and magazine due to poor eyesight but did regularly go online. Several respondents also commented that they would like information face –to-face from people coming round to their house since this would give them the opportunity to ask questions. In addition, exhibitions, manned by people, in local shopping centres/high streets.

The role of third party organisations

A key finding was that all of the interviewees strongly felt that a collaborative approach involving different organisations and individuals was needed to better communicate smart meters and IHD's. The majority of respondents didn't trust energy companies, as illustrated in the following comments made by a respondent, but still felt energy companies should play a key role in any smart meter communication activity.

> *"…do we trust them* (i.e. the energy companies)*? I don't think so. Especially when they (i.e. the energy companies) keep …when they put them up* (i.e. prices), *put the prices up and in the next breath it shows you how much profit they've made"* (Respondent 1)

Despite this view, many respondents still felt that the energy companies would be the experts when it came to the delivery of smart meters and had confidence in their technical expertise and knowledge.

Nevertheless, it is important to stress that a significant theme as mentioned above is that all participants felt that other organisations and individuals in addition to the energy companies should also be involved in any smart meter activity. The most commonly cited organisations and individuals were the government, National Energy Association, Energy Savings Trust, Sure Start, Age UK and Martyn Lewis. For instance, a respondent observed:

> *"If you've got all the parties that are involved in it* (i.e. smart meter/IHD implementation) *singing from the same sort of hymn sheet type of thing, I think that would make the biggest impact I think* (i.e. encourage people to have smart meters/IHD's)*"* (Respondent 4)

The respondents from the Sure Start centre clearly had a strong bond with their Sure Start representative and felt that they would be a source of advice they would trust due to their existing relationship. This was also true of the elderly respondents interviewed at the Age UK drop in centre. This also concurs with early evidence from the Energy company respondent who talked of higher response rates to smart metering direct mail communications sent in collaboration with Age UK.

Furthermore, one of the researchers observed the role of the carer during the interviews. This highlights the need to involve carers and the relevant support organisations (such as Carers UK, Crossroads)

Recommendations

1. The marketing message used to raise awareness about smart meters should be the same across all demographic groups. Clearly the message should emphasise the benefits associated with smart meters whilst deemphasising the drawbacks.

The benefits to be highlighted include:-

- The device would enable them to better use energy, reduce energy bills and therefore save money. The savings in turn need to be of a significant amount, in the words of one respondent, 'pounds not pennies'.
- Smart meters would allow them to budget more effectively and allow them to more easily avoid debt.

Only one respondent mentioned environmental benefits associated smart meters, the main driver was saving money. Interestingly, for the energy companies a major benefit of smart meters is the removal of estimated bills. This only emerged once as a perceived benefit in the sample we used.

The perceived drawbacks which the message needs to address include:-

- The notion that you have to pay for the smart meter and IHD~~IUD~~, it needs to be clear that the installation has no financial charge
- Customers need to be reassured their tariff and payment arrangements will remain the same after smart metering
- The concern that the device itself uses energy
- The accuracy of the device
- The fear of adopting new technology combined with apathy towards any form of change particularly for older respondents.

2. The marketing media/tools used to raise awareness about smart meters should largely be the same across all demographic groups. For example, all individuals mentioned the need for TV and radio advertising and exhibitions in local town centres. However the marketing media/tools should also vary in that several single mother respondents mentioned the need for information from the internet and surprisingly also stated that information from door to door representatives in their own homes was an appealing approach. In contrast, the need for internet and door to door representatives was not mentioned by elderly respondents.

3. Third party organisations and individuals clearly play an important role in supporting any marketing messages and tools/media in the context of smart meters. This is due to the role they play as opinion formers and leaders in the communication process. There was an underlying feeling of mistrust towards the energy companies and the Government amongst most respondents and therefore the role of third party organisations is critical to the successful delivery of any marketing campaigns.

The Bigger Picture

A key finding from this report is that smart meters should not be looked at in isolation but instead be part of a wider movement towards improving housing conditions for fuel poor groups whilst also increasing levels of energy efficiency and knowledge. Housing conditions are often poor for these people both old and young and more needs to be done to ensure that fuel poor people live in energy efficient homes. Smart meters will only go part of the way in helping fuel poor groups reduce their energy consumption because of their housing conditions and more work is needed in this area.

In addition, triple A rated knowledge was extremely limited amongst fuel poor respondents and this did not play a significant role in how these respondents selected electrical household goods. Retailers could play a more prominent role in ensuring that consumers, particularly from more disadvantaged groups, are provided with clear and helpful information to allow them to purchase electrical goods which will help reduce their long term energy consumption.

An Alternative Perspective

The fundamental principle behind the smart metering programme is to reduce energy consumption. The authors of this report feel that for some of the elderly community energy consumption needs to increase in order to improve their health and wellbeing. Based on the input from a carer, too many elderly people are fearful of heating their homes and smart metering may encourage them to keep their house warm.

Conclusions

This report has clearly highlighted a need for marketing to raise awareness of smart meters amongst fuel poor customers in a way that addresses the perceived benefits and drawbacks these individuals have. While at a strategic level the marketing message and media should be similar for all fuel poor groups, at a tactical level there should be some differences. For example, the internet is a tool that will have greater impact on the behaviour of young single mothers compared to the elderly. Moreover, this research identifies the critical role of third party groups and individuals in the successful delivery of any planned smart metering marketing activity. Furthermore, this study raises a number of broader implications for the Government, housing providers and retailers in the support of energy reduction amongst fuel poor groups. We would also like to highlight our concerns about viewing smart meters solely as a way of reducing energy consumption when clearly many elderly people need to increase their consumption in order to improve their health and wellbeing.