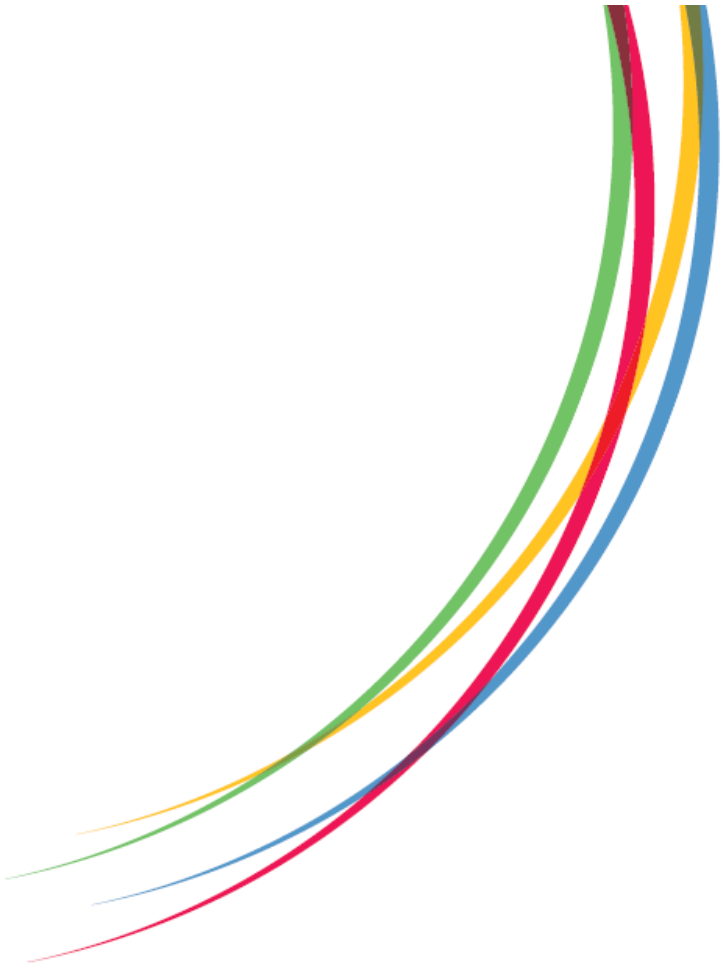

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Understanding how people think about their daily spending

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Non-technical summary

This research sought to explore how people think about their personal finances (including both active and passive spending), with a view to understand how to minimise the burden on participants when recalling their daily spending. This was to inform the design of a mobile app, created as part of *Understanding Society:* the UK Household Longitudinal Study. The research asked participants to recall recent spending both spontaneously and using three pre-defined models.

Through qualitative research that included 20 depth interviews conducted by Kantar Public, this research gained insight into how people recall spending and common issues that emerge. Key insights include:

- Participants differed in how they track their finances: some were meticulous trackers and others inaccurate trackers. Which group individuals fell into was largely a result of the importance they placed on finances or their own perceptions of their financial situation.
- Participants were most able to think about spending in terms of events during their day. They were able to think systematically through their day based around these events.
- Cash and online spending were commonly overlooked. These transactions were perceived to be less of an event during the participants' day and therefore less top of mind during recollection.
- Involving categories of spending in the recall process is beneficial for two reasons. First, categories were useful in prompting forgotten spends, and second, participants had a genuine interest in gaining a better understanding of their finances in the form of categories and felt they would be incentivised to use the app if they were able to gain personalised, category-based feedback.
- Clarity over the definition of passive spending is low. Participants were uncertain whether this referred to direct debits only, or also included other spending not done in person, such as online purchases.

These findings informed a number of recommendations for the development of an app to collect information about daily spend.

Understanding how people think about their daily spending

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Abstract

ISER commissioned Kantar Public to conduct in-depth face-to-face qualitative interviews to explore how people think about their personal finances (including both active and passive spending), with a view to understand how to minimise the burden on participants when recalling their daily spending. This was to inform the design of a mobile app, created as part of *Understanding Society:* the UK Household Longitudinal Study. The research asked participants to recall recent spending both spontaneously and using three pre-defined models.

Through qualitative research that included 20 depth interviews conducted by Kantar Public, this research gained insight into how people recall spending and common issues that emerge. As well as contributing to the understanding of how people conceptualise spending, the qualitative research also provides recommendations for improving the way that this information can be elicited from participants using an app.

Keywords: qualitative research, expenditure

JEL Classification: D13, D14

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Executive summary

This research sought to explore how people think about their personal finances (including both active and passive spending), with a view to understand how to minimise the burden on participants when recalling their daily spending. This was to inform the design of a mobile app, created as part of *Understanding Society:* the UK Household Longitudinal Study. The research asked participants to recall recent spending both spontaneously and using three pre-defined models.

Through qualitative research that included 20 depth interviews conducted by Kantar Public, this research gained insight into how people recall spending and common issues that emerge. Key insights include:

- Two types of financial trackers were found: meticulous trackers and inaccurate trackers. Which group individuals fell into was largely a result of the importance they placed on finances or their own perceptions of their financial situation.

- Participants were most able to think about spending in terms of events during their day. They were able to think systematically through their day based around these events.

- Cash and online spending were commonly overlooked. These transactions were perceived to be less of an event during the participants' day and therefore less top of mind during recollection.

- Involving categories in the recall process is beneficial for two reasons. First, categories were useful in prompting forgotten spends, and second, participants had a genuine interest in gaining a better understanding of their finances in the form of categories and felt they would be incentivised to use the app if they were able to gain personalised, category-based feedback..

- Clarity over the definition of passive spending is low. Participants were uncertain whether this referred to direct debits only, or also included other spending not done in person, such as online purchases.

These findings informed a number of recommendations:

- The app should look to immediately ask participants to reflect on events during their day to facilitate them systematically working through their spending. Following on from this, prompts should be added around commonly forgotten spending, including cash payments, online payments and any unusual spending.

- Language used around 'spending' should be changed to focus on 'transactions' or 'purchases' to reduce participant focus on a depleting current account and further encourage the incorporation of cash payments and spending from other accounts. Additionally, language around 'passive' spending should be adapted to focus more specifically on direct debits and standing orders to increase consistency in what is included in monthly payments.

- Upfront information should be provided around common mistakes or queries that participants have raised. This should enable a greater consistency in responses.

- Feedback should be provided in personalised categories as an incentive to participation. However, participants should be able to skip through the tagging of categories to improve honesty of reporting among those who want to hide certain spending behaviour.

1. Background and methodology

1.1 Background

Understanding Society: the UK Household Longitudinal Study is a major research study, run by the Institute for Social and Economic Research (ISER), designed to enhance understanding of life in the UK and how it is changing. The study, funded by the Economic and Social Research Council (ESRC), takes a sample of 40,000 households containing around 100,000 individuals and attempts to interview all household members annually. The study includes an "Innovation Panel" (IP) which is a longitudinal sample of individuals living in around 1,500 households. The IP is used for methodological testing.

Accurate measurement of household finances is a key element of the Understanding Society survey. To this end, ISER conducted the first Understanding Society Spending Study[1], in which IP sample members were invited to download an app onto their smartphone or tablet and scan their receipts for one month, or alternatively to record spending where they had no receipt, or report a day without spending. The take-up rate for installing the app and submitting at least one receipt was 12.58, with around 80% of those taking part over the full month (Jäckle et al 2017)[2].

ISER is now conducting a second Spending Study, which aims to collect monthly spending at the individual level in a way that minimises both recall error and respondent burden. To increase the proportion of sample members who participate in the study, ISER will ask people to provide a brief daily report on their spending that day, and will offer the opportunity to complete the data collection online if preferred (rather than download the app). Prior to designing a revised app for the study, ISER commissioned this qualitative research to provide insight on how to ask people to report their daily spending in a way which makes it easiest for them to recall and minimises burden.

1.2 Aims of the research

As noted above, the overall aim of this research was to inform the development of an app used as part of a survey to measure individuals' active spending (e.g. cash, cheque and card transactions) and passive spending (e.g. direct debit and standing order). This research explored how to ensure that the app measures accurate data about spending with the least burden on the participant and that it increases recall for as wide a group of the population as possible.

Specifically, the research sought to:

- understand how participants think about their daily spending and what techniques they use to recall their spending;
- explore how participants respond to various recall methods that could be presented in the app and what prompts and nudges would work to encourage accurate recall of spending;
- explore ways in which ISER could filter people according to their preferred method for recalling spends (e.g. categories, payment methods, timing etc.);

[1] The first *Understanding Society* Spending Study took place in between IP9 and IP10 in October-December 2016
[2] Jäckle, A., Burton, J., Couper, M.P., and Lessof, C. (2017). Participation in a mobile app survey to collect expenditure data as part of a large-scale probability household panel: response rates and response biases. Understanding Society Working Paper 2017-09. Colchester, University of Essex.

- explore how participants could be engaged to take part in the study; and,
- explore incentives to participating, and whether the prospect of getting feedback on their own individual spending would be an incentive or barrier to participation.

1.3 Methodology

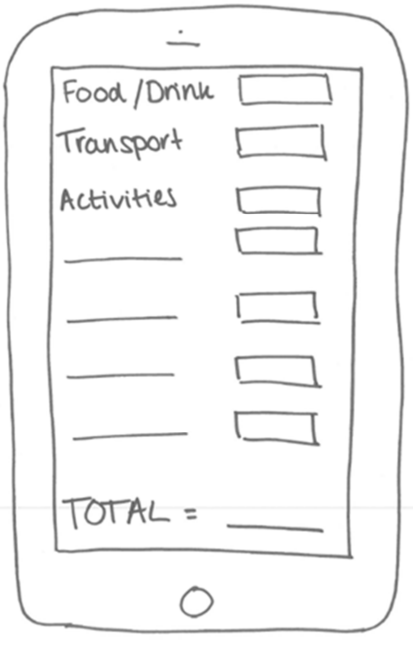
In order to achieve these aims, Kantar Public undertook 20 in-depth interviews with members of the public. Each interview lasted approximately 60 minutes and took place in the respondent's home. To ensure a broad range of experiences were reflected in the research, respondents were recruited from three locations around the UK (London, Birmingham and Leeds) with a mix of gender, ethnicity, age, socio-economic status and working status (see appendices for further sample breakdown).

Fieldwork took place between 6th and 16th of November 2017. In-depth interviews were semi-structured and led by a topic guide outlining questions, probes and activities, including engaging with stimuli and designing an app (see Appendix A).

During the in-depth interviews, participants were asked to visually map their spending without receiving prompts and think out loud the logic of how they reached their final amount. This logic was then explored further in response to different prompted methods of recall. Participants were provided with four different models based on specific recall methods (see examples below) and encouraged to annotate and respond to these in relation to their daily spending. Stimuli were hand-drawn with simplified imagery to allow participants to be creative, and encourage them not to get stuck on the visuals of a computer generated image.

1. Time of day: Mapping spending based on different periods of the day, showing both times and common reference points

2. Categories of spending: model outlining common categories of spending with space to add personalized / specific categories



3. Spending method: model with common payment methods, with space to add additional methods

4. Passive spending: model to record monthly spending of direct debits and standing orders

Participants were encouraged to think about a recent day for each of the visual models above and complete each model to the best of their ability. This approach enabled a full exploration of both spontaneous preferences in method, but additionally the extent to which each method prompted further recall.

Interviews were audio recorded and all quotations used throughout the report are verbatim, drawn from these recordings and attributed by age of participant and location. Following the completion of fieldwork, analysis was conducted by researchers using pro formas (in this case, a data management tool used to thematically group data) based on key themes and objectives of the research. This method synthesises large amounts of qualitative data. This data then fed into a brainstorming session where researchers unpacked the data, including sense checking and testing hypotheses. This rigorous, multi-layered process fed into the subsequent presentation and this final report.

2. How people think about and recall their spending

This section outlines the different ways people thought about their spending, providing context to their reactions to the potential app models. First, we reflect on differences in the extent to which people were confidently able to recall their spending, and therefore needed more or less prompting. Second, we consider timing preferences for when people would prefer to capture their spending using an app, highlighting the likely impact of lifestyle considerations on engagement and accuracy. Finally, we outline people's natural preferences for thinking through their spending, and how this relates to recall. This enabled us to explore how different groups of people may think in different ways as well as establishing which technique works for most people.

As will be presented in detail below, we found two types of financial tracking behaviour: meticulous trackers and inaccurate trackers. Inaccurate trackers were found to need more prompting to enable full recall, whereas meticulous trackers were able to adapt to any given model. Despite the differences in the level of prompting needed to fully recall spending, both groups tended to think about their spending behaviour in terms of events during their day.

2.1 Tracking personas

Understanding the context of how people think about and keep track of their spending allows us to recognise the extent to which different groups of people are able to adapt to different methods of recall and identify groups that will need more assistance in recalling spend. As will be explained further below, while participants ranged in economic and social grade, there was no direct correlation between these characteristics and financial tracking behaviour. Instead, we found two distinct groups of tracking behaviour: meticulous trackers and inaccurate trackers. The ability of an individual to adapt to different recall methods was largely determined by which of these groups they fell into.

Meticulous trackers consistently maintained a strong degree of control over their finances, often employing their own methods to track where their finances were spent. These methods ranged from keeping a spreadsheet of all incomings and outgoings, to keeping receipts and checking an online banking app multiple times a day. Demographic characteristics did not play a strong role in determining who was a meticulous tracker. Instead, this was driven by individual perceptions of the importance of personal finances. While for some, this could mean living on a budget, for others it revolved around financial history. This resonated particularly strongly with one retired meticulous tracker. While she described herself as being financially comfortable, a history of family debt in her childhood led her to continue to worry about her financial circumstances and meticulously track her spending through a log of receipts and active use of bank statements.

There was no overarching preference of recall method for meticulous trackers, either spontaneously or when prompted. Instead, this group was able to adapt to different methods of recall well, largely as a result of the detail involved in their existing tracking. This suggests that the app design should be less focused around the needs of this group.

"I've got a spreadsheet with everything on…I like spreadsheets. I've got a master spreadsheet of what should come out each month." (42, Birmingham)

In contrast, inaccurate trackers' less active record keeping of their spending resulted in initial calculations

of total spends typically being underestimated. This was the case both when unprompted and when using one method of recall. However, when prompted with a second method (regardless of which method), the recall of this group significantly improved. This uncovered a range of different spends that had been previously forgotten. The total amount was a cause for surprise or concern for some participants:

"That's a lot. That's £80! I didn't intend to spend that much when I left the house." (45, London)

Inaccurate trackers (similarly to meticulous trackers) did not have a single preference of recall method (see section 3). This, coupled with the improvement of recall from using multiple recall methods, demonstrates the need for prompts around more than one recall method to gain a more accurate picture of spending patterns. Overall, these findings suggest that the design of the app should prioritise inaccurate trackers and cater to the additional prompts needed to facilitate accuracy for this group, and also that this strategy would not hinder meticulous trackers as they are adaptable to different methods.

2.2 Preferences of timings of recall

While the extent of financial tracking was an important factor in understanding ability of recall, it was lifestyle that caused the biggest variety in *when* people preferred to recall spend. Three distinct preferences of when to recall spending emerged: while on-the-go, at the end of the day, and at the end of the week.

Those whose preference was to recall on-the-go generally had unfixed, dynamic lifestyles, and often had irregular working patterns. This reduced the scope for recall to become a routine activity at one point in their day or week. This group generally spent in smaller amounts, but on a more frequent basis. As a result of these lifestyle factors, it was felt that recalling on-the-go would reduce the level of burden that they may otherwise feel.

"I think most people would [prefer to recall on-the-go]. We live in a town where everyone is very busy. Everyone is on the go." (32, Birmingham)

High technological literacy was a common characteristic of this group, and they were generally already using a range of apps throughout the day for different reasons. As a result of the immediate entry of spending data, this group felt they would be able to adapt to a range of different recall methods.

Those who felt most comfortable with recalling their spending at the end of the day largely had busy working or family lifestyles, particularly during the day, and included people such as teachers and parents. These individuals were most comfortable recalling their spending in a quiet moment at the end of the day. Routine was central to the lifestyles of this group and recalling their spending was seen to be something that could fit into this.

A small number of participants had a preference towards recalling their spending at the end of each week, and this largely centered on feeling too busy to complete every day. For one participant, this decision was based around his tight budget. He wanted to set a budget at the start of the week and review this at the end to better understand how accurate his perceptions of his spending were in reality.

"I'd do it at the end of the week. It would work better cos I could review it against my budget" (35, Leeds)

2.3 The recall process

Participants were fairly uniform in their spontaneous approach to recalling spending, thinking about what they had done on the day in question, with key events emerging as a result. Participants then worked in a

systematic and chronological way through their day, using the key events as reference points and prompts of spending. The day was generally broken down into three sections: morning, afternoon and evening. While issues of different structures of days, particularly night shifts, did emerge, participants were generally able to spontaneously personalise what they viewed to be morning, afternoon and evening with their own routines. For families, the day was split into three sections, largely focused around meal times as this was when the family came together.

Events fell into two categories: routine and unusual, and the type of event impacted ease of recall. Participants were able to think through routine events very quickly, with precise amounts typically ingrained into their memories. Some events falling under this category included travel to work, a daily coffee or lunch at work. The detail of spending during unusual events, such as going to a football match, Christmas shopping, or having a day out, were less top of mind and required more thought to uncover the total spend. As a result, working through these events often uncovered in-the-moment spends that had not previously been considered.

Following this spontaneous exploration, participants were presented with three different recall methods: payment method, spend categories, and time of day. When asked about the most useful recall method, participants generally claimed they were thinking in terms of categories or wanted to think in categories. For some, this was a result of most of their transactions falling into one category; for example, buying petrol from a petrol station and nothing else. For others, the lean towards categories was due to their desire for feedback on their spending to be presented to them in this form. This type of feedback was thought to be the most useful to participants in identifying where they were overspending and what changes could be made to their spending behaviour. However, as noted above, it was actually more natural for participants to think in terms of events or entire receipts rather than focusing on the categories involved. Thinking about events reduced the burden on participants in the recall process as many were more able to recall an entire transaction. For example, one female discussed her ‘weekly shop’ at the supermarket. The shop was made up of multiple categories including groceries, toiletries and clothes. She was less able to break the receipt down into categories, instead thinking about the event of going to the supermarket in its entirety.

“If there were lots of different categories on the same bill I’d find it difficult to split it up by category” (43, Birmingham)

3. Key issues faced

This section outlines the key issues of confusion that people face when recalling their spending and the inconsistencies in completing recall models. We explore the problems surrounding small cash payments, cash withdrawal and online spending, which demonstrate the need for prompting on these spending types. We then look into sensitive forms of spending to further understand how participants may be encouraged to include spending perceived to be socially undesirable. Finally we explore the inconsistencies around passive spending and the importance of framing this with simple language.

As will be discussed in more detail below, we found that the language used around 'spending' and 'active' spend resulted in some confusion. The use of 'spending' led people to think in terms of their depleting current account, and some transactions (such as cash spends and spending from a savings account) were then unaccounted for. Furthermore, online spending was often not seen as an 'active' spend and was therefore misplaced, while others deliberately hid spends to hide transactions from themselves or from others. The recommendations that emerge from these issues are explored in Section 4.

3.1 Cash payments recall

Despite the overarching preference and success of thinking about spending in terms of events, it was found that small, spontaneous cash payments, such as on-the-go refreshments, were initially forgotten by a number of participants. Having small amounts of cash unaccounted was perceived to be less of a problem for participants and losing track of where this was spent was not a concern. This reflected the spontaneous nature of some spending, which was seen as less of an event and therefore did not register strongly with them.

"I often forget what I spend in cash cos it's just little bits…you just put the change back in your pocket and forget about it" (45, London)

"I sometimes do things spur of the moment with spare change and it doesn't really register" (45, London)

However, once prompted on small cash transactions, participants were able to identify a greater number of transactions. Reminders helped participants to think more deeply about events within their days and increase their level of recall. For some, multiple transactions emerged as a result of one simple prompt:

"I didn't think of the gloves and the cup of coffee for my Mum after the game. I'm suddenly thinking of all these details now. It would be handy to have a reminder on the app… the cash is what's sparking my memory right now" (45, London).

3.2 Depleting current account

As noted above, different interpretations of 'spending' caused some inaccuracies when accounting for transactions. Generally, participants initially thought of spending in terms of their current account depleting in value, rather than specific physical transactions. This posed questions about how consistently spending was recorded and whether it was recorded in line with the needs of the app. One particular difficulty faced by participants was around cash withdrawals. Withdrawing cash was sometimes counted as a 'spend', even if the cash taken out was not physically spent within that day.

"I haven't spent it but yeah it says debit card so I would [enter it]" (78, London)

Participants were inclined to add cash withdrawals as a category of spend (Figure 1) demonstrating that despite no purchase actually occurring, it would still be included. Participants then did one of two things when they spent the cash: some would not include the transaction, leading to inaccuracies in records of when the money was spent; others counted the transaction, leading to double counting of the cash and therefore inaccuracies in records. Inclusion of cash withdrawals could be a result of the language used. For some, the use of the word ‘spend’ related to money coming out of their current account; instead using language such as ‘purchase’ or ‘transaction’ may help to offset this and encourage participants to think more about exchanges of money.

Figure 1: Categories of payment model with inclusion of ‘cash withdrawal’ (inserted by participant)

Another difficulty for participants related to recalling larger spends that people had to save up for. These were often overlooked by participants as a result of their mind-set of thinking in relation to a depleting current account, and an uncertainty of where to place this type of spending. Some put money aside for these purchases or for occasions throughout the year; for example, a number of participants discussed saving money throughout the year for Christmas. This was either done through depositing money throughout the year into a savings account, other bank account or, for one participant, in cash. These money transfers were not typically included in active spending as they were not considered ‘normal’ spend and could be different amounts across different months depending on how much disposable income the participant was likely to have that month. However, when the larger spend was then made, participants felt that they would still not include it, largely as a result of it not coming out of their current account and therefore not being seen as an active spend.

3.3 Online spending

Some variation emerged in how participants viewed online spending and how well it was recalled, which resulted in some inconsistencies in how it was accounted for. In particular, the way in which spending was framed as being either ‘active’ or ‘passive’ was not consistent with how some participants thought about spending. Instead, these people split spending by that done inside the home (for example, direct debits leaving their account or online purchases) and that done outside of the home (traditionally ‘active’ spends with cash or card).

“I’d like to keep it as outer and inner world” (57, London)

For these individuals, online spending sat under the ‘internal’ spending type and therefore had a more natural fit with passive spending.

For others, online spending was simply forgotten by participants and as a result was excluded when recalling spend. It was generally forgotten for one of two reasons. First, the event narrative led to some forgotten spends; online spending was perceived to be less of an event during their day, often occurring quickly or while doing something else (for example, watching television). Online spending was less of a routine event than other spends, particularly for those who are less technologically literate and those who shopped online less frequently. This made online spends less top of mind and therefore needed more prompting to recall.

A second reason for forgetting about online spending was due to it being perceived to be a separate method from debit or credit card spending, despite coming out of the same account. When prompted around spend based on method of payment, some participants opted to include a separate option for online spending. They tended to think of active spending in terms of traditional methods including cash, debit and credit cards, particularly amongst those less confident with technology and those spending online less regularly.

“I didn’t think of that – I was thinking of paying with my cash or with my card in person” (28, Leeds)

This way of thinking led to some participants unintentionally excluding online payments when recalling their spending, leaving an inaccurate total figure.

3.4 Hiding spends

In contrast to the mistakenly overlooked or inaccurately placed spending previously discussed, some participants expressed an inclination to deliberately hide certain spending. This occurred for three separate reasons, each of which should be addressed in a different way: confusion over where to place spending; hiding spending behaviours from oneself and hiding spending from other people.

Participants had low levels of tolerance for burden, making them unlikely to spend a long time trying to work out where to place certain spending. Instead, when they were confused, they were more likely to ignore the payment altogether, reducing the accuracy of information entered. One example of this was a male participant living in fairly precarious circumstances – on disability allowance and living with his retired mother. His family regularly lent money to one another throughout each month. As he knew he would be getting the money back at some point he was uncertain whether to include this as an outgoing payment. As a result of his confusion, he left the transaction out altogether.

“If I loan my brother or my Mum money, do I include that?” (45, London)

For other participants, spending was hidden deliberately to protect themselves from what they felt would be a distressing moment of understanding how much they were spending on certain events. These were generally what they perceived to be undesirable activities, such as online gambling. There were two stages in the process of identifying undesirable spends that were found problematic, making this a more complex issue to resolve. The first hurdle was entering the amount spent; some were yet to admit to themselves what this amount might be. Secondly, attributing this to a category initiated concerns over this being visible information to others, and the judgement that may be attached to it. It is therefore difficult to encourage the inclusion of this information.

Finally, a small number of participants expressed concerns that family members or friends may be able to see what they are spending their money on through the app and would therefore be inclined to exclude certain events. These largely involved purchases that other people may perceive to be excessive or unnecessary, rather than 'undesirable'. One young female discussed a monthly 'beauty box' package that she receives, that she was keen to keep hidden from her mother, who might not approve of the amount that she was spending. She felt that she would leave this out:

"The beauty box is something I wouldn't admit to because you can always buy beauty products. So, let's be honest, I don't think I would admit to that one." (31, Birmingham)

However, as participants were not concerned about understanding the amount spent on these items themselves, they were more open to solutions. Some suggested that they would feel more able to enter the amounts without including categories or attributing the purchase to a 'miscellaneous' category.

3.5 Passive spending

Clarity around the definition of passive spending was low, causing some participants to inaccurately place spending within the app. This was more common for those in more precarious living situations who had less structured ways of paying monthly sums of money, such as bills. The majority of participants paid their bills through direct debits or standing orders and felt it was easy to know to include these in passive spending. However, for others, bills were paid to family members or housemates less regularly and with varying amounts either through online transfers or in cash:

"My mum asks for something towards the bills each month" (45, London)

The inconsistency in how and what these individuals pay each month made it less clear where these payments should be placed. This demonstrates a need for greater clarity around what passive spending includes. Placing the emphasis on language around direct debits and standing orders should help to offset this confusion.

Some monthly bills, such as utilities or phone contracts, varied in amounts over different months. This impacted the way in which participants interpreted passive spending. Instead of producing exact amounts, some participants estimated the outgoing cost, usually based on the average amount of that bill. This was particularly prominent in inaccurate trackers who were unlikely to have checked the amount for the month, instead thinking roughly what the amount would be:

"It's about that much…it changes month on month" (31, Birmingham)

Inaccurate trackers were also more likely to find listing their monthly payments to be too extensive. They often missed multiple payments and required additional prompts to facilitate complete recall. On the other hand, meticulous trackers were much better able to recall their passive spending without prompting. Some were able to recall with little thought whereas others knew their monthly allowance for active spending and worked backwards from that to uncover their passive spending.

Understanding of the definition of monthly passive spending caused further confusion when thinking about quarterly or annual payments. There was a level of uncertainty amongst participants over whether they should include these payments at all, leave them out if not paid that month or calculate the proportionate amount for that month.

"I'm gonna divide that by 12 to work out how much that would be a month" (40, London).

The inconsistency in how participants dealt with this confusion caused inaccuracies in how monthly spending was recorded, suggesting a need for greater clarity in language and instructions.

4. App design recommendations

This section outlines key recommendations for developing the app, with a particular focus on overcoming the issues discussed in the previous section. We explore how compliance, recall, honesty and participation can be optimised through the design.

We recommend that the app focuses on asking people about events during their day, with follow up prompts for commonly forgotten spends. Furthermore, providing clear, upfront information on the purpose of the app is likely to enable greater understanding of the research and therefore greater compliance as well as increasing the honesty of responses.

4.1 Improving compliance

The research findings suggest that understanding the key aims and purposes of the app is important in enabling participants to complete the app correctly. As discussed in previous sections, some payments were excluded as they were assumed to be not relevant or atypical spending. Clarity over the expected inclusion of these payments is likely to encourage participants to account for unusual payments.

Clarifying what the research does *not* look to explore is also important in facilitating increased compliance. For example, involving categories increased the burden of the research for some participants. Confusion over which category to place items in took them extended periods of time, and knowing that this would not be used for the research may encourage them to think less extensively about this and spend more time recalling amounts.

Transparency is also important in increasing the consistency of completion. Common themes of issues emerged across participants and outlining what is expected for these issues should address and offset these upfront before recall begins. Some common issues that should be addressed are:

- Whether to include cash payments at the point of withdrawal or when a cash transaction occurs
- Whether payments into a savings account or other account should be included within active or passive spending
- Whether to include one-off or large payments that do not reflect their idea of ‘normal’ spending
- Whether online spending should be included within active or passive spending

4.2 Improving recall

We found that spending recall was strongest when thinking about specific events during the day in question. Generally people split their day into morning, afternoon and evening and personalised this based on their own lifestyles and preferences. To improve recall, the app should therefore be based around this preferred method of recall, initially asking people to contextualize their day through thinking about what they did in the morning, afternoon and evening. From this, events will be triggered in their memory and participants will be better able to work systematically through their day to most accurately recall spend. An example of how this may look can be found in Figure 2.

Figure 2: Example of design to encourage event narrative

While this method was the most effective in prompting recall, some further prompts are needed to uncover frequently forgotten spends and to ensure that those who may have skimmed the upfront information are completing the app consistently with other users:

- Unusual spends – participants should be prompted to include any unusual spends. This could be upfront as they are being asked to think about events during their day or as a prompt when they finish entering their spending

- Method – prompting on payment methods improved accuracy of recall, particularly for cash spending. It is recommended that participants are reminded to include any ‘spare change’ or cash spending as they complete the app

- Category tagging – although category tagging will be used primarily to improve participation (Section 4.4), it is likely to also facilitate further recall for those who choose to use it. Including some standardised categories will prompt on previously forgotten spends, and allowing for personalised categories will allow for flexibility in how people categorize their spending. It is suggested that ‘online spending’ is included as a category to further emphasise that online spending should be included in active rather than passive spending.

4.3 Improving honesty

Including ‘tagging’ as an optional feature is likely to offset some deliberately hidden spends, however this is more problematic for those hiding their spending habits from themselves than those hiding spending habits from other people.

For spending that is being hidden from others, including family members or friends, adapting the tagging feature could help to overcome the concerns held by participants, which should facilitate greater honesty in completion. Allowing participants to skip through the tagging phase of the app would allow these individuals to avoid attributing the spending that they had concerns over others seeing. Alternatively,

participants should have the option to tag certain spends under a different title, such as ‘Other’, ‘Miscellaneous’ or hide it under any personalised category of their choice. Enabling them to avoid specific categorization should increase ease with the app and therefore honesty.

However, for those who leave out certain spending to hide it from themselves (see section 3.4), resolution is more problematic. Upfront reassurance that the category data is not being used for research and allowing the tagging feature to be skipped may ease participants’ concerns that other people may see the data and cast judgement on them. However, it does not address the ‘pain point’ of self-acknowledgment of the amount spent on that activity. Therefore, it is likely that some participants will exclude certain spending despite attempts to offset their exclusion.

For those excluding spending as a result of confusion over where to place it, upfront guidelines providing directions for common problem areas should facilitate resolution of the majority of cases. Upfront transparency should allow them to identify where in the app their spending should be placed.

4.4 Improving participation

Feedback on how much money was spent and on what was found to be of genuine interest to participants. The majority were either already interested in their personal finances or wanted to take a greater interest. Providing feedback in categories was felt to be most useful, allowing personal analysis of where ‘too much’ money was being spent, where there was room for increased spending, and facilitating a greater understanding of spending patterns. Participants suggested a need for common categories to be readily available to select for those who are less interested in feedback and would prefer to spend less time on the app. However, some degree of personalization was also valued, enabling a greater depth of feedback for those who want more detail on specific elements of their spending.

The gamification of the app was also seen to be an incentive to participation. Some suggested that they would like the option to enter a weekly estimate at the beginning of the week and be shown how they matched up to this at the end of the week, to see how accurate their perceptions of their own spending were.

4.5 Behaviour change

The nature of the feedback desired by participants outlined in the previous section raises some concerns over behaviour change and how this will impact the data emerging from the app. Participants were probed over how they envisioned their behaviour to change as a result of the feedback. They felt that any significant changes would largely be long-term, rather than in the month of completing the app.

Participants acknowledged that some changes to their behaviour may occur over the first few days of use; they may regulate their spending to a greater extent and buy less than usual. However, generally they felt that after a few days of regulating their behaviour, they would be likely to return to normal spending levels. It is therefore suggested that a few days’ worth of data could be discounted to account for this behaviour regulation.

Participants felt that following a month of using the app and reflecting on personalized feedback, longer term behaviour changes were likely to emerge. Participants anticipated using the feedback to identify where they can make sustainable spending cuts, rather than the short term fixes likely in the first few days of the app. As participants will be using the app for one month only, this poses few problems for the research.

5. Conclusions

This qualitative research explored how people thought about their active (e.g. cash, cheque and card transactions) spending and passive (e.g. direct debit and standing order).) spending to inform an app designed to track finances. The aim was to reduce the burden on those completing the app and improve participation. The research explored a number of more specific objectives, and responses to these can be found within this section.

How participants think about their daily spending and what techniques they use to recall their spending:

Two different ways of thinking about daily spending were found: meticulous trackers and inaccurate trackers. These behaviours were driven by participants' own perceptions of their financial positions or the importance they personally placed on finances. Despite these different behaviours, we found some consistency in how participants spontaneously thought about their spending. When thinking about active spending, people focused on key events during their day as their starting point. From these events, participants were able to effectively work through their day in a systematic way, and were successful in accurately accounting for most of their spending. As a result, the app should focus on initially prompting participants to think about events during their day in order to improve recall.

How participants respond to various recall methods that could be presented in the app and what prompts and nudges would work to encourage accurate recall of spending:

Of the models of recall presented to participants, there was no overarching preference. Meticulous trackers were able to accurately adapt to each of the models, facing very few problems in recall throughout. Inaccurate trackers varied in their preference of methods, but largely tended to underestimate the amount spent when using just one model. When prompted with another they were able to recall more spending. We found that four specific prompts facilitated better recall for this group: cash spending, unusual spending, online spending and categories of spending.

Ways in which ISER could filter people according to their preferred method for recalling spends:

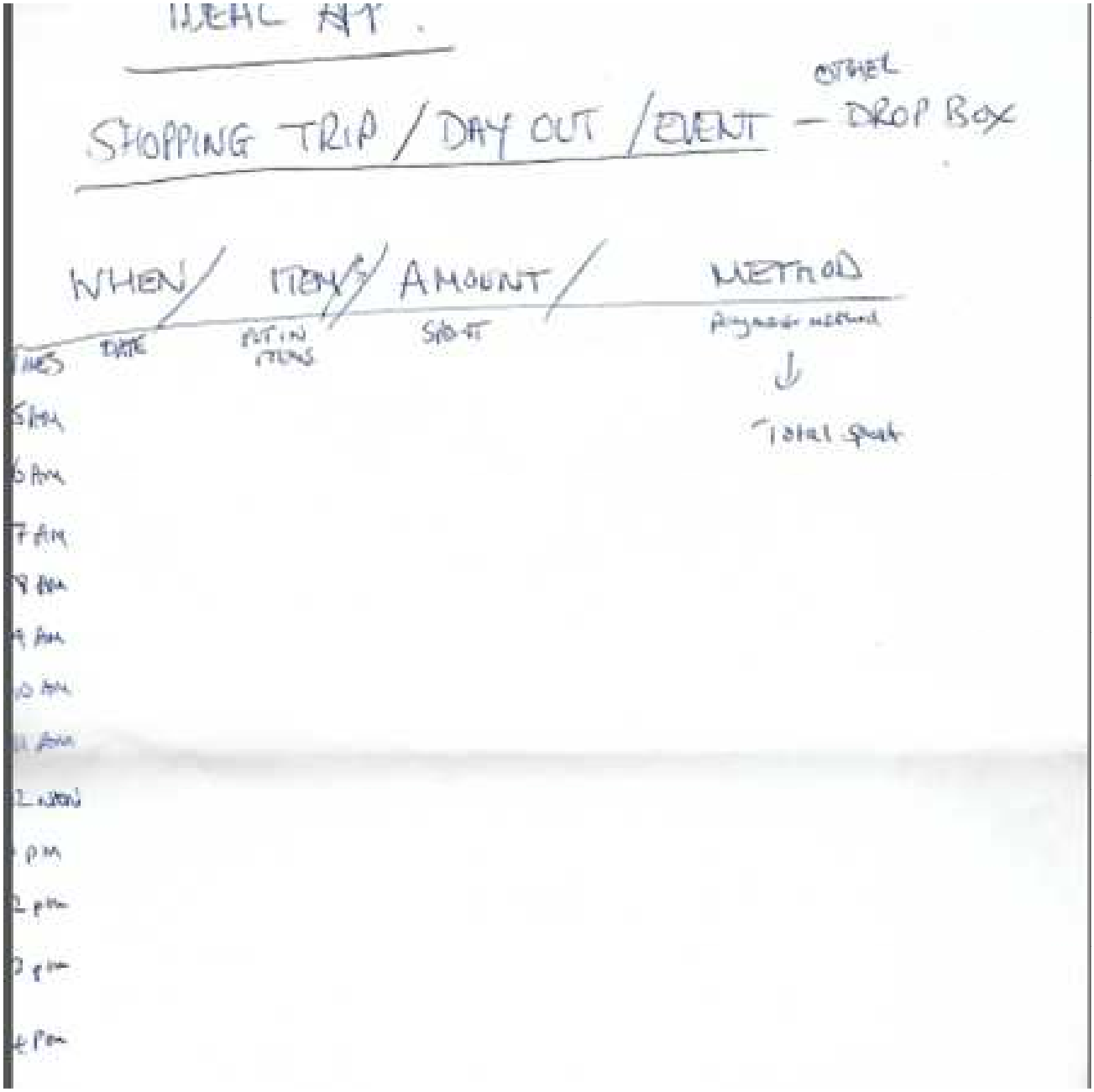
Participants should not be filtered to different methods of recall, instead being universally prompted on categories and payment method. There were no overarching characteristics to decipher who would prefer different methods and recalling by events was largely deemed to be the most effective method of recall.

How participants could be engaged to take part in the study, their incentives to participating and whether the prospect of getting feedback on their own individual spending would be an incentive or barrier to participation:

Participants largely had an appetite for understanding more about their personal finances. Some categories of knowledge were widely accepted as being useful; however there was an interest in specific feedback depending on the lifestyle of each individual. We therefore suggest that financial feedback is provided to participants, with them having the option of looking at the feedback or choosing to ignore it. Ideally, this feedback would be personalised to the needs of participants, based on categories they have chosen for themselves. This will make the feedback more useful and therefore is likely to increase participation.

Appendix A

Participants own app models



bits + bats

morn — food + drink
clothes + acc

bits + bats

Lunch — food + drink
clothes + acc

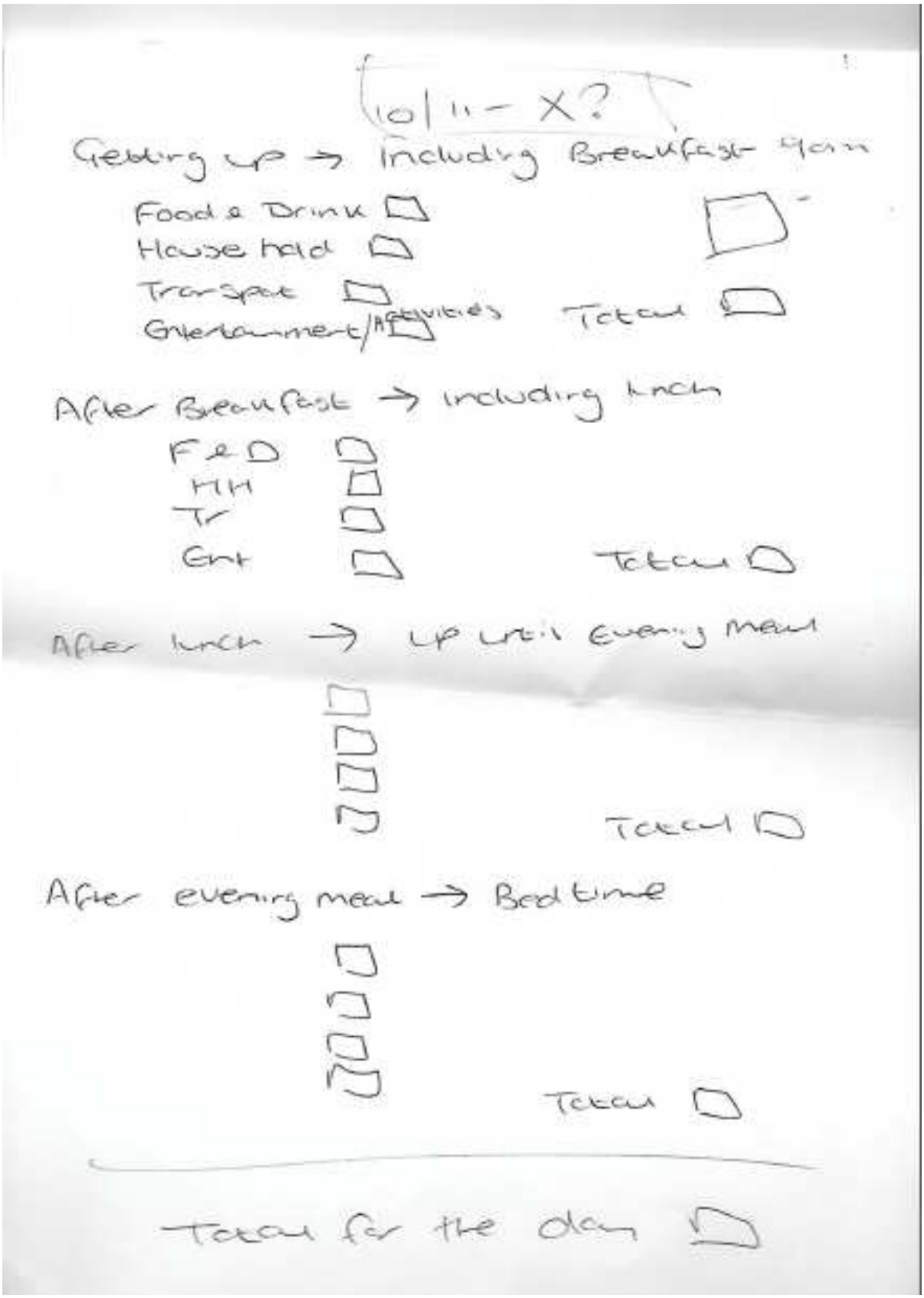
bits + bats

Dinner — food + drink
clothes + acc

bits + bats

evening — food + drink
clothes + acc

Direct Debits


10/11 - X?
Getting up → including Breakfast 9am
Food & Drink
Household
Transport
Entertainment/Activities
Total
After Breakfast → including lunch
F&D
HH
Tr
Ent
Total
After lunch → up until Evening Meal
Total
After evening meal → Bed time
Total
Total for the day

B/

(1) Have u spent any money ?

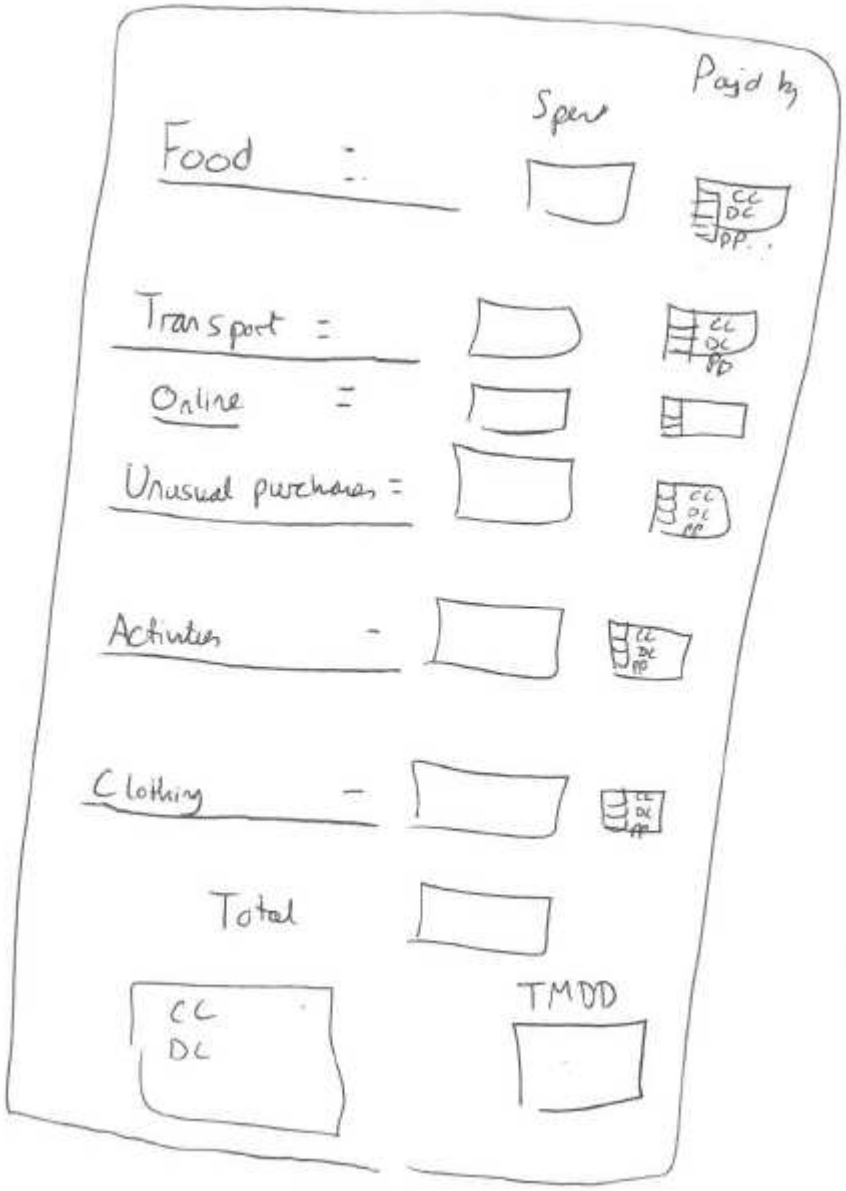
(2) How much ?

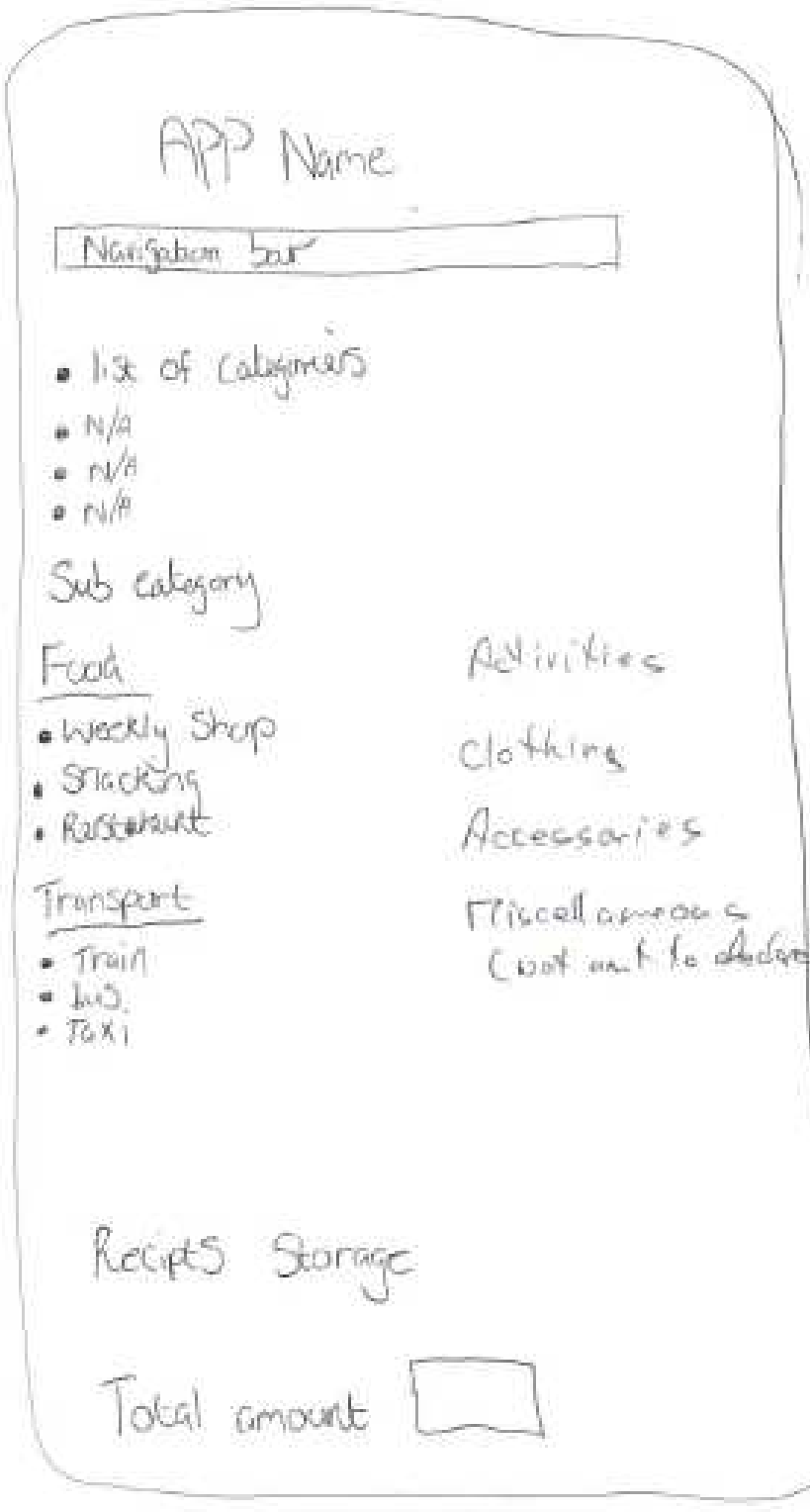
(3) What on ?

- food
- etc

(4) How did you spend this
ie paypal
- DD

(5) Date + time of spend


Paid by
Spent
Food :
CC
DC
PP
Transport :
Online :
Unusual purchases :
Activities -
Clothing -
Total
CC
DC
TMDD


APP Name
Navigation bar
• list of categories
• N/A
• N/A
• N/A
Sub category
Food
• Weekly Shop
• Snacking
• Restaurant
Transport
• Train
• Bus
• Taxi
Activities
Clothing
Accessories
Miscellaneous
Receipts Storage
Total amount

Appendix B

Sample table

		Quota	Achieved
Spend frequency	Several times a day	At least 3	6
	About once a day	At least 3	6
	More than twice a week	At least 3	8
Financial confidence (1 being the least confident)	1	A mix	4
	2		4
	3		2
	4		4
	5		6
Spend type	Cash	At least 5	14
	Debit Card	At least 5	17
	Credit Card	At least 5	7
App use	Yes	Maximum 3	2
	No	Minimum 17	18