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Interventions for digital pension contributions

People's Pensions Trust, Ghana

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About the project

This technical note highlights the potential of behavioural interventions to address the "access–usage" gap for digital financial services (DFS), focusing on People's Pension Trust in Ghana. insight2impact provided support to People's Pension Trust by conducting a behavioural diagnosis and experiments to increase digital pension fund contributions by informal workers. The research highlights the importance of testing interventions in new contexts, and the effectiveness of simple nudges for encouraging behaviour change. The full findings from this analysis can be found in the report. This document provides more insight, to provide more insights into how to conduct a behavioural diagnosis, and it includes some of the key methodological learnings.

1. Overview of the behavioural design project phases

Phase 1: Objective setting and mapping

The purpose of Phase 1 is to narrowly and clearly define the behavioural challenge so that the project objectives correspond with the relevant business and stakeholder's objectives. This is accomplished through a series of workshops and a review of the administrative data to understand what the primary objective should be, how it can be measured and what the customer journey is.

Box 1: Methodological learnings from Phase 1 with PPT

Examine data infrastructure while setting the behavioural objective

People's Pension Trust (PPT) had completed the process for setting a behavioural objective during a training Academy facilitated by insight2impact prior to the start of this project. One of the constraints that we discovered, during the later phases of the project, was that their data structure did not always allow us to measure the variables of interest with as much precision as we would have liked. Had we reviewed the data infrastructure during the objective-setting process, we would have been able to either adjust our objective or introduce data collection of important variables.

Conduct a baseline assessment while determining the behavioural objective

The existing contributions through DDOs was very low at PPT; and we discovered, when we went to field, that the sales agents very rarely discussed it with customers. As such, our experiment design did not have a completely clean control group, and our baseline sample was very small. Had we done a baseline assessment first, we would have been able to introduce a time-series component over the full length of the project to give a more accurate control group and a larger base rate for comparison.

Phase 2: Diagnosing the root causes of current and desired behaviour

The purpose of Phase 2 is to set up the research activities, conduct the research and analyse the findings, allowing for a broad and deep understanding of the challenge as well as the root causes of the observed customer behaviour, and the psychological and situational factors that are producing it.

A multimodal approach was taken, comprising literature review/desktop research, customer and staff interviews, focus groups with a representative sample of existing customers, dogfooding (gaining a deeper understanding of the customer's experience as they move through particular situations or complete certain tasks) and data analysis on target population. This approach ensured that findings were validated across multiple information sources and that the researchers avoid drawing inaccurate conclusions, based on what is most interesting or obvious or what best fits with their pre-existing beliefs.

Box 2: Methodological learnings from Phase 2 with PPT

Active participation from the right people within the team

The team at PPT was extraordinarily helpful during this project, and there was incredible assistance from the Sales Agents, in particular. However, because the aim for this project was jointly to conduct the research and to capacitate the team at PPT, their Head of Communications was included in many of the research activities and fieldwork exercises. It quickly became apparent that this fieldwork was infinitely more valuable than that which we conducted with just the sales agents, as the Head of Communications had a clear, nuanced view of the project overall.

Framing insights in relation to the behavioural objective ensures that the team stays within scope.

During the initial ideation stages, it became apparent that the team was likely to shift focus from the specific behavioural objective of this project – which focused on existing customers – to signing up new customers. When this challenge first presented itself, we reframed the insights and focused on their connection to the behavioural objective, which was useful in keeping all stakeholders' focus narrow and on the goal for this project.

Phase 3: Designing behaviourally informed interventions

The purpose of Phase 3 is to use an understanding of the research findings to identify evidence-based interventions that are to be recommended as remedies to the behavioural challenge. Potential interventions are identified through a review of the literature, along with an intervention ideation workshop conducted with all primary stakeholders in the project. These interventions are then consolidated into a large list and the team conducts an intervention prioritisation workshop to select those that will be included in the final design.

Box 3: Methodological learnings from Phase 3 with PPT

Include all stakeholders in the intervention ideation stage.

The PPT team generated a set of creative and unique interventions that directly addressed some of the key barriers. They often had useful intuitions and contextual knowledge that were able to inform the practicalities of the intervention ideas, which the South African team may not have considered.

Introduce practicalities earlier on in the design phase.

While the intervention prioritisation tool was incredibly useful as a mechanism for selecting specific interventions, we found that several large changes were needed when we began the process of building out the different intervention components. It is worth considering how the practical elements for implementation can be ideated on, and solved earlier in, the design process.

Phase 4: Experimenting with interventions in the field

Phase 4 aims to understand the impact of interventions in the field by using experimental techniques. Based on the outcome of these experiments, a confident decision can then be made about whether an intervention is worth scaling. These experiments will allow us to test the impact of the interventions among a larger group of customers/targeted population.

Box 4: Methodological learnings from Phase 4 with PPT

Set up measurement structures in person, rather than remotely.

We had some challenges in communicating with the PPT team on the data requirements and requests for measuring the impact of the experiment. This created additional work for their team and delayed the analysis process for the project. Although it is possible to determine data and measurement structures remotely, we found that doing so in person would have been helpful.

Using WhatsApp voice notes to gather detailed daily information is a useful additional tool.

One of the compliance checks that we included into our experiment protocol was to have the Sales Agents send our team daily voice notes to discuss their experiences and challenges from the day. This turned out to be invaluable information, as it gave us additional qualitative data that could be used to add nuance to the quantitative results.

Expressed interest is a useful variable, but measurement should be very precisely specified.

We included a variable in our data frame that captured whether customers expressed interest in DDOs. Our goal was to measure the drop-off from those who indicated that they were interested but did not sign up. However, we found that the agents would capture this as “yes” whenever customers did not directly state that they were uninterested, which gave an inflated estimate of the number of customers who had expressed interest. Because we had asked the agents to capture comments on the drop-off points, which they were diligent in completing, we were able to create a variable for expressed interest by measuring all customers who started the sign-up process but were unable to complete it.

2. Phase 1: Objective setting and mapping

Having set a behavioural objective, there are several activities that can be conducted during this phase and that better prepare the team for both the diagnose and design phases. These activities ensure that the research team can minimise the impact of pre-existing beliefs, has a clear understanding of the customer journey and can focus the research on the questions that are relevant for the behavioural objective.

To this end, our team completed three separate exercises: an assumption-sharing workshop, a behavioural mapping workshop, and a pre-mortem. The results of these are discussed below.

2.1. Assumption-sharing workshop

The assumption-sharing workshop helps us to develop initial hypotheses that explain the behaviour we are currently seeing or preventing the behaviour we are hoping to move towards. In addition, it ensures that we capture and test our assumptions – both those that we are aware of and those we hold subconsciously – as explicitly as possible, to avoid falling prey to confirmation bias. There are several ways to identify the assumptions held regarding the behaviour in question. For this project, we used Ideas42's Decision–Action Model (see Figure 1 below). This model separates the decision that is required by the customer from the action that they need to perform to understand the various scenarios that can occur.

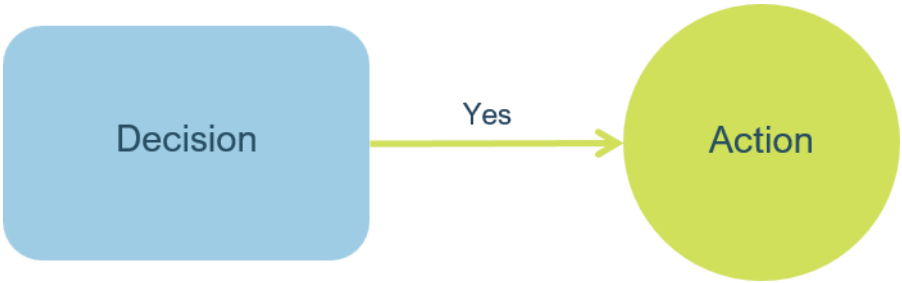

Figure 1: Decision–Action Map (Ideas42)

In the case of the behavioural objective for PPT, the decision would be for customers to sign up to direct debit orders, and the action would be to complete the sign-up process.

This creates four possible decision–action scenarios:

Scenario 1:

The decision is **no**, and the user **doesn't** take action

Scenario 2:

The decision is **unclear**, and the user **doesn't** take action

Scenario 3:

The decision is **yes**, and the user **doesn't** take action

Scenario 4:

The decision is **yes**, and the user **does** take action

Table 1 below highlights some of the possible explanations for each scenario, developed during the workshops with key PPT stakeholders.

Scenario 1: Decision is no, and no action taken	**Scenario 2**: Decision is unclear, and no action taken
• Lack of trust • Lack of knowledge • No interest in pension • No trust in digital payments due to experience • Unclear about product feature • Uncomfortable about ceding control of funds to a third party • No mobile wallet • No funds • No time	• Lack of trust • Lack of knowledge • Averse to technology • No knowledge about Pensions • Pension is for the formal sector • Worried about fraud • Unclear about product feature • Unappreciative of feature relevance and impact • Withdrawal challenges
Scenario 3: Decision is yes, and no action taken	**Scenario 4:** Decision is yes, and action is taken
• Averse to technology • Unavailability of e-money • Unavailability of merchants • Used to old ways • Lack of trust in Momo • Fear of the unknown • No mobile wallet • No time to set up • Uncomfortable ceding control of funds to a third party	• Ease and simplicity • Trust and confidence in product • Availability of e-money • Embrace technology • Appreciation of consistent fund growth • Knowledge of mobile wallet and usage

Table 1: Drivers and barriers to decision scenarios

2.2. Behavioural mapping workshop

Behavioural mapping is a visual representation of the decisions and experiences that a user makes when moving towards the targeted behaviour (see Figures Figure 2, Figure 3 and Figure 4 below). This map allows us to identify every individual behaviour and decision that leads up to the targeted decision or action. From this, we can investigate and hypothesise all the ways that this journey can break down, preventing the customer from taking the primary action.

At this stage, we develop these as a series of hypotheses, which can be tested in Phase 2. Once we have identified the full behavioural map, we can narrow in on the primary action pathway. These are the actions that a customer will absolutely need to take in order to complete the action that we are targeting.

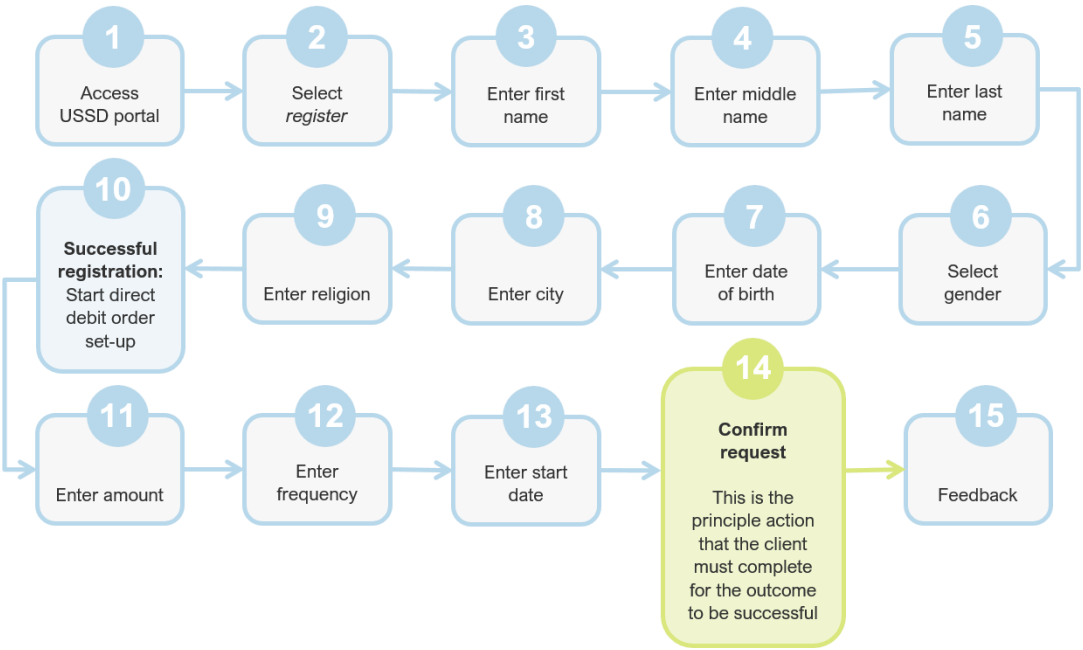

Figure 2: Primary action pathway

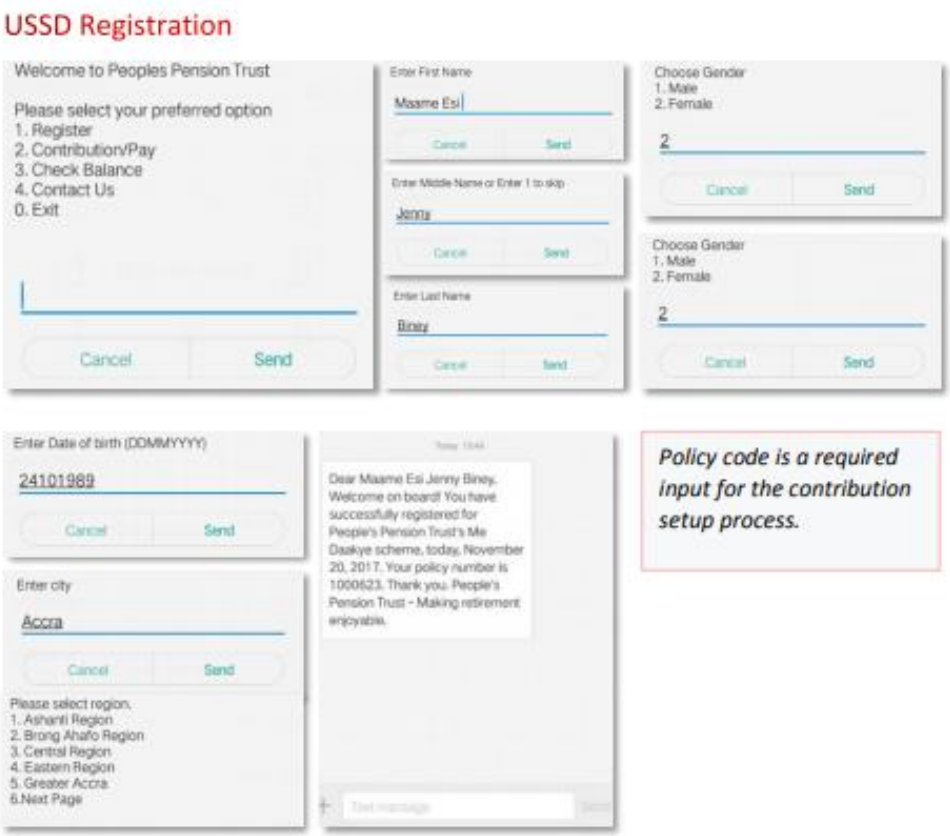

Figure 3: USSD registration process

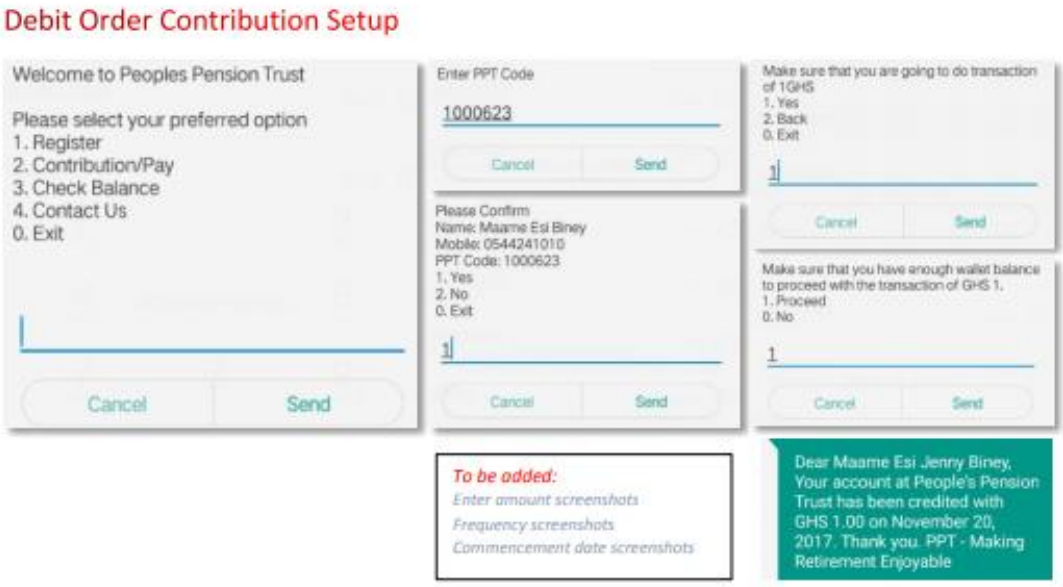

Figure 4: Direct debit order set-up

2.3. Pre-mortem

Following this mapping exercise, we conducted a pre-mortem, which aims to identify reasons for drop-off in the customer journey. This builds on the assumption-sharing exercise (discussed earlier) and looks at specific points along the customer journey to identify barriers at each stage.

Registration process	Potential barriers
	Registration process
Access USSD portal	• Doesn't know short code for USSD *789*111# • No prompt to engage in the task • No access to their phone at the moment of prompt • An expectation that they won't have enough time to complete the task at the moment of prompt
Enter first name	• Cannot read and write • Inactive for a minute (USSD time-out) • Confusion with compound names • Use of nicknames and numbers due to trust issues
Enter middle name Enter last name	• No knowledge of it • Cannot spell it • Inactive for a minute (USSD time-out)
Select gender	• Non-familiarity with the word "gender" • Not comfortable to answer (stereotyping)
Enter date of birth	• Entering the wrong order • Don't know date of birth • Forget to include the slash
Enter city	• Entering the wrong order • Don't know date of birth • Forget to include the slash • Multiple dates of birth so unsure which to enter
Select a region	*The number listed currently does not capture all options. The list needs to be expanded.*
Successful registration – confirmation SMS	• Confirmation message not received • Not checking messages • Wrong mobile number used/no number available? • Network challenges in accessing the SMS
	Contribution set-up
Access USSD portal	• Doesn't know short code for USSD • No prompt to engage in the task

Registration process	Potential barriers
	• No access to their phone at the moment of prompt • An expectation that they won't have enough time to complete the task at the moment of prompt • Unclear of which option to select
Enter code (from SMS)	• Unsure of how to access code • Can't find SMS with code • Unsure of how to access messages during the set-up process
Enter amount	• No knowledge of amount being requested for (haven't considered this) • Unclear about currency expected, e.g. cedi or Ghanaian cedi • No pension goal makes the decision on the amount difficult
Enter frequency	• Does not understand the frequency • Limitations on current listed options – daily, weekly, etc.
Enter start date	• Wrong order for the date • Start date unknown
Confirm request	• Doubts around the decision to contribute • Unsure about amount and frequency • Need to confer before deciding • Not enough money in their mobile wallet
Receive feedback	• Confirmation message not received • Not checking messages • Wrong mobile number used? • No number available? • Network challenges in accessing the SMS

Table 2: Primary action pathway pre-mortem

3. Phase 2: Diagnosing root causes

Research methodology

There are a large variety of research tools available to those interested in studying human behaviour. For this project, we focused on using the following methods:

Focus group discussions with staff and stakeholders

For this research, we conducted a series of focus group discussions over two days with key stakeholders and staff members at PPT. The details of these discussions are captured in the table below.

Focus group session	Description	Number of participants
Management focus groups	Held at the PPT head office, these focus group discussions were conducted in person with the Business Development Managers (BDMs) and other management staff at PPT. BDMs are responsible for overseeing specific market areas and managing the sales agent staff.	12
Call centre agent focus group	Held at the PPT head office, this focus group was conducted with the call centre agents who handle customer care and deal with customer complaints.	4
Sales agent focus groups	Sales agents are responsible for collecting cash contributions from customers, as well as signing up new customers and orchestrating cash withdrawals. We conducted multiple focus groups with small groups of sales agents to investigate their understanding of the challenge.	8

Table 3: Focus group discussions

The goal for these discussions was to create a general understanding of the context within the marketplace, the perceptions of staff on why customers were not signing up for DDOs and the positioning and sentiments of the staff on the service in general. We were then able to take the insights from these discussions and validate them during our customer interviews.

Customer interviews

Customer interviews allow the research team to connect with the customers and understand their real experiences and sentiments. These interviews allowed us to understand what benefits the customers saw in the DDO payments and to understand the barriers that prevented them from signing up for the product.

The interviews took place across four marketplaces in Accra – Mallata, Okai, Makola and Osu Presby – and included successful engagements with 28 existing PPT customers and four potential customers. Most interviews were conducted on a one-on-one basis, with some group discussions held (two to three individuals). Existing PPT customers were targeted for the interviews, and some non-customers participated in the group discussions, which shed light on the general perception of PPT, the formal financial sector in Ghana and the importance of social norms in this setting.

Dogfooding

Dogfooding is a technique used to gain a deeper understanding of the customer experience as customers complete certain actions, as well as observe any barriers that customers may face when trying to complete a given action or task. It involves going through the process yourself and observing others perform them, while noting any questions, responses, hesitations and uncertainties involved.

For this research, we began with the behavioural map (see Section 2.2). After an examination of this map, which included screenshots of the entire USSD process, we were then able to complete the process ourselves, as well as observe customers in the field as they completed the process with the assistance of sales agents.

Behavioural literature review

Prior to beginning field work, we researched the culture in Ghana, the operation and context of the marketplaces, and we reviewed existing literature on digital product uptake and pension fund sign-up in these contexts. In addition, we conducted secondary literature reviews to confirm, test or investigate the findings and insights from the field. This review of the literature provides a more theoretical and thorough understanding of the findings observed in the field and provides a basis for Phase 3, when we begin exploring evidence-based interventions for changing behaviour.

Administrative data analysis

PPT has used experimentation in the past and uses a test-and-learn approach to their work. This allowed us to investigate whether particular strategies have worked for similar challenges in the companies' history. This informed the design process later on, as it ensured that we avoided strategies that were previously unsuccessful and made adjustments to our interventions, based on lessons learned from previous changes.

4. Phase 3: Designing the interventions

Developing behaviourally informed interventions

To identify behavioural interventions, the outputs from Phase 2 were used to generate potential behaviourally informed intervention concepts. These were shared during a set of internal and external ideation workshops, during which the most viable intervention concepts were identified and documented. These intervention concepts then went through another round of internal and external workshops to assess their feasibility (among other dimensions) and prioritise the preferred interventions. See Table 4 below for an example of the prioritisation process.

Once the prioritised intervention concepts had been identified, we went through a pre-mortem workshop with the primary PPT stakeholders. The pre-mortem enabled us to get a better sense of the failure scenarios and how best to mitigate them. Thereafter, we had a round of interviews with frontline staff to get their feedback on the intervention concepts, and how they might work in the field. In addition, we went out into the field to get feedback from existing customers in the targeted marketplaces, to better understand the feasibility and impact of the intervention concepts. This feedback was used to consolidate the interventions into a structured programme and further developed the individual components. The programme design and individual components were then presented in an iteration workshop to the primary PPT stakeholders, who further adapted the concepts.

	Top 5 interventions					
Tactic name	Target businesses with two or more vendors	Link debit orders to a lottery	Use visuals to improve understanding	Double first five transactions for all new DDO set-ups	Show growth of DDO within marketplace	Record audio testimonials from existing customers
Access	In person	Radio?	Pamphlet	Digital, operational	In person	Audio
Blink Automatic response	4	5	4	5	4	4
Exposure Likelihood of interaction	5	5	5	5	4	3
Effect size Magnitude of success	4	4	4	5	4	4
Feasibility Technical ease	4	4	5	4	4	5
Buy in Political ease	4	4	4	5	4	4
Scalability Ease of scaling	5	3	5	3	5	5
Learning value Impact of insights	5	4	5	4	4	5
Score Overall rating	32,000	19,200	40,000	30,000	20,480	24,000

Table 4: Intervention prioritisation

5. Phase 4: Testing the interventions

Phase 4 of the behavioural design process involves testing the interventions that have been developed, in order to understand their effectiveness. This is accomplished through establishing clear hypotheses and understanding what evidence would indicate that these are validated or proven false. This section discusses the hypotheses being tested, an in-depth overview of the experimental design and provides the regression results for the second and third experiment.

5.1. Experimental design

Data and experimental design

To maximize the impact and insights from the experiment, we conducted three separate experiments from 27 May to 3 July 2020 (six weeks), to answer three primary research questions and test the associated hypotheses.

There are several factors that are important in experiment design. Perhaps most important in these are the randomisation of participants and the design of the control and treatment groups, discussed more in Box 1 below. To maximize the impact and insights from the experiment, we conducted three separate experiments during this process.

Experiments:

Experiment 1: To test whether a behaviourally informed onboarding programme increases interest in and sign-up to DDOs, PPT agents approached clients in the treatment marketplaces with a behaviourally informed onboarding programme, to assess whether expressed interest in and sign-ups to DDOs was higher among the treatment groups. The experiment included a timeseries component, as we compared sign-ups prior to the experiment to sign-ups during the experiment period. The control group was not exposed to the programme; and, instead, agents in these marketplaces continued to sell DDOs using the same techniques as those used prior to the experiment.

This experiment was possible because COVID-19 forced agents in all marketplaces to increase their sales attempts for DDOs. Unfortunately, the agents in the control marketplaces did not track the number of customers that they approached or discussed DDOs with, so an accurate sample description is not possible. However, the treatment group comprised 596 customers who were successfully approached and 573 who were willing to engage with the DDO sales pitch.

Experiment 2: To test whether video testimonials making use of authority bias or social norms were more effective at encouraging sign-up, we conducted a second experiment in the form of a randomised control study. This was conducted only in the three marketplaces where the behaviourally informed onboarding programme was introduced. The treatment groups for the second experiment included individuals who were taken through the behavioural onboarding process and were also shown a video testimonial. These individuals

were further split up into a treatment group that was shown a testimonial video of a market vendor describing the benefits of DDOs (social norms) and another treatment group that was shown a video testimonial of an influential person describing the same benefits. The control group was only taken through the behavioural onboarding process. The table below summarises the sample[1] from the experiment:

	Customers approached	Successful approach	Listened to the sales pitch	Testimonial watched[2]
Control group	177	175	168	13
Treatment one (Social norms)	214	211	205	117
Treatment two (Authority bias)	206	205	195	115
Total	602	596	573	247

Table 5: Experiment 2 sample size

Experiment 3: To test whether an implementation plan increases successful DDO payments, several clients were exposed to an implementation plan. These clients used for the third experiment were those in the treatment marketplaces who had been taken through the behaviourally informed onboarding programme and who had successfully signed up for DDOs. These individuals were then further split up into a control group and a treatment group. The control group included individuals who signed up for DDOs during the first week of the experiment. These customers were not given any instructions or additional information after signing up. The treatment group included everyone who signed up for DDOs in the final three weeks of the experiment, and these customers were exposed to an implementation plan directly after signing up for DDOs. A summary of the sample is given below:

	Sample
Control	177
Treatment	214
Total	206

Table 6: Experiment 3 sample size

In this experiment, we measured whether the control group or the treatment group was more likely to successfully make its first contribution and also measured the average number of successful contributions made by each group in the weeks after it had signed up.

1 An experiment pilot was also conducted, and these customers have been included in the totals reported here. No changes were made after the pilot, which ran for the first three days of the experiment. 67 of the individuals approached were from the pilot stage.

2 Some customers in the control group were exposed to the testimonial during the early stages of the experiment. Agents reported that this was due to customers grouping together to talk when the national lockdown was first lifted. After the first week of the experiment, no further customers were shown the testimonial when in the control group.

Box 5: Randomisation protocols

For the experiments, we randomised across marketplaces, rather than at the individual level.

How would we ensure that there were no inherent biases in those who were assigned to the treatment and control groups?

After exploring multiple options, we elected to limit the experiment to three marketplaces in Accra. These marketplaces were selected because of the large number and variety of customers in them. Many marketplaces in Accra focus on specialised sales, such as automotive parts of fresh produce; however, these have inherent biases in income, gender and digital literacy and therefore were not chosen. The selected marketplaces have a wide range of customers, as they are broken into multiple sections, but the agents who work in them have customers throughout the sections. This meant that a focus on these marketplaces gave a more representative sample of all PPTs customers. In addition, the marketplaces selected for the control group have distinct features within each marketplace but are representative of similar demographics when all four marketplaces are considered collectively.

How would we choose which customers would be in the control group and each of the treatment groups?

Customer membership numbers were selected as the unit of randomisation, as this ensured that agents would remember which customers received specific treatments, allows validation in the future and ensured that there was no self-selection into treatment groups or control groups. Agents can confirm the membership number before continuing with the behaviourally informed onboarding process, so the assignment decision is made with just-in-time information for the assignment decision to be easy for agents. The final number of the seven-digit membership number was used to allocate customers into each group. For instance: membership numbers that ended with a number between 1 and 3 were allocated to one group; between 4 and 6 were allocated to another; and between 7 and 9, plus numbers that ended in 0, were allocated to the final group.

How could we ensure that the agents were complying with the experimental protocols?

Several measures were put in place to ensure agent compliance. First, agents submitted voice notes to the remote team to debrief on their experience of the day. Second, PPT's call centre was used as a means of following up with customers to gather qualitative research on their experiences, their understanding of the process and their sentiments following the sign-up process. Finally, we examined administrative data from PPT, which captured customer details, including the date that customers signed up to DDO, to ensure that there was consistency between the agent-collected data and the actual sign-ups.

Variables of interest

During the experiment, agents collected data on the customers and the customer journey, in order to capture otherwise unmeasurable variables. This was done on paper, as the agents moved through the marketplace and interacted with customers. The data was then digitally captured in the afternoons, and a quality check was conducted by the agent supervisor in field. The full customer journey was captured by the agents, primarily through binary variables, as displayed in the table below:

Variable captured	Description
Date	Date of interaction
Sales Agent	Sales agent name
Market	Marketplace of customer
Customer Name	Customer name
Policy Number	Customer policy number
Assigned treatment group	Control, Treatment 1 or Treatment 2
Was the approach successful?	Yes/No
Did the customer listen to the sales pitch?	Yes/No
Did the customer watch the testimonial?	Yes/No
Did the customer express interest in signing up for DDOs?	Yes/No
Did the customer successfully sign up for direct debit order payments?	Yes/No
How much did the customer commit to contributing?	Value
How frequently did the customer commit to contributing?	Daily/Weekly/Monthly
Did the customer check whether they could access their mobile money wallet?	Yes/No
What gift did the customer select?	T-shirt/ Apron
Did the customer mention the gift prior to the end of the process?	Yes/No
Comments from the agent	General comments from the agent on where the customer dropped off and why

Table 7: Variables captured

5.2. Regression results

Experiment 2

We conducted a probit analysis for Experiment 2 to examine whether video testimonials using social norms or those using authority bias were more effective at increasing interest in DDOs. The dependent variable was whether the customer expressed interest in DDOs, and the independent variable was the treatment group. No controls were added in the results shown here[3].

	Coefficient (std errors)	**Average marginal effects**
Intercept	-0.46770*** *(0.09861)*	
Treatment 1	-0.13042 *(0.13495)*	-0.04512
Treatment 2	-0.04970 *(0.13481)*	-0.01756
AIC	724.86	

***p<0.01, **p<0.05, *p<0.1

Table 8: Probit analysis: The impact of the testimonials on expressed interest (Experiment 2)

We also conducted a Local Average Treatment Effect (LATE)[4] analysis to examine whether Treatment 1 or Treatment 2 increased interest in DDOs. The dependent variable was whether the customer expressed interest in DDOs, and the independent variable was the treatment group. For this analysis, all those who did not watch the testimonials were placed in the control group. No controls were added in the results shown here.

	Coefficient (std errors)
Intercept	0.29885*** *(0.02457)*
Treatment 1	0.02082 *(0.04822)*
Treatment 2	-0.02466 *(0.04793)*
R-squared	0.4583

***p<0.01, **p<0.05, *p<0.1

Table 9: LATE analysis: The impact of the testimonials on expressed interest (Experiment 2)

3 While models with controls were run, the results of all were statistically insignificant, and only the base model is reported here.

4 LATE models are ones which estimate the effect of the treatment on the subset of the sample that takes the treatment if they were also assigned to the treatment. In other words, it estimates the effect of the treatment on "compliers" and is a model that accounts for non-compliance or non-adherence to the treatment.

Successful sign-up

We also conducted a probit analysis to examine whether Treatment 1 or Treatment 2 increased successful sign-up to DDOs. The dependent variable was whether the customer successfully signed up, and the independent variable was the treatment group. No controls were added in the results shown here.

	Coefficient (std errors)	**Average marginal effects**
Intercept	0.7318*** *(0.1848)*	
Treatment 1	-0.4245 *(0.2494)*	-0.04512
Treatment 2	0.3256 *(0.2695)*	-0.01756
AIC	195.04	
		***p<0.01, **p<0.05, *p<0.1

Table 10: Probit analysis: The impact of the testimonials on sign-up (Experiment 2)

We also conducted a second LATE analysis to examine whether Treatment 1 or Treatment 2 increased successful sign-up to DDOs. The dependent variable was whether the customer successfully signed up, and the independent variable was the treatment group. For this analysis, all those who did not watch the testimonials were placed in the control group. No controls were added in the results shown here.

	Coefficient (std errors)
Intercept	0.73077*** *(0.04273)*
Treatment 1	-0.03846 *(0.08181)*
Treatment 2	0.12217 *(0.08608)*
R-squared	0.4357
	***p<0.01, **p<0.05, *p<0.1

Table 11: LATE analysis: The impact of the testimonials on signup (Experiment 2)

Successful first payment

We conducted a standard OLS regression to examine whether the implementation plan had any effect on the successful first payment via DDOs. The dependent variable was a binary variable indicating 1 if the first payment was successful. The independent variable was a binary variable indicating 1 if the customer was exposed to an implementation plan. No controls were added to the results reported here.

	Coefficient (std errors)
Intercept	0.83562*** (0.04075)
Treatment	0.09031 *(0.0.07842)*
R-squared	0.3452
	***p<0.01, **p<0.05, *p<0.1

Table 12: OLS analysis: The impact of an implementation plan on successful first payment (Experiment 3)

Average number of contributions

We conducted a standard OLS regression to examine whether the implementation plan increased the average number of successful contributions made by a customer.
The dependent variable was the number of payments made by a customer in the 30 days prior to signing up to DDOs. The independent variable was a binary variable indicating 1 if the customer was exposed to an implementation plan. No controls were added to the results reported here.

	Coefficient (std errors)
Intercept	3.7123*** (0.5909)
Treatment	1.3247 *(1.1372)*
R-squared	5.049
	***p<0.01, **p<0.05, *p<0.1

Table 13: OLS analysis: The impact of an implementation plan on successful first payment (Experiment 3)

About Cenfri
Cenfri is a global think-tank and non-profit enterprise that bridges the gap between insights and impact in the financial sector. Cenfri's people are driven by a vision of a world where all people live their financial lives optimally to enhance welfare and grow the economy. Its core focus is on generating insights that can inform policymakers, market players and donors who seek to unlock development outcomes through inclusive financial services and the financial sector more broadly.