

CROWD POWER

Who Is the Crowd?



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1.0 EXECUTIVE SUMMARY



This report is the first of its kind, exploring the profiles of those funding energy access-related crowdfunding campaigns, as well as the motivations and challenges associated with partaking in this type of crowdfunding. With this report, we hope to equip entrepreneurs, non-profits, incubators, practitioners, donors, development finance institutions (DFIs) and crowdfunding platforms with a deeper understanding of energy access crowdfunding and the role of interventions to catalyse donations and investments in energy access related crowdfunding.

We find that there are nuances across, and within, each crowdfunding type – donation, reward, debt and equity. The funder profiles, their motivations and the role of incentives – such as match funding – differ between each of the six archetypes we investigate in this paper. In our last paper *Crowd Power, Success and Failure: The Key to a Winning Campaign* we identified seven archetypes relevant to energy access crowdfunding:

Donation crowdfunding

1. Partnership model
2. One-off fundraiser

Reward crowdfunding

3. Aggregate network contributions
4. Mega-campaigns

Debt crowdfunding

5. Microloan debt
6. SME loans

Equity crowdfunding

7. Equity

We used these archetypes as a framework to analyse data from the crowd – obtained through online surveys of over 900 individuals and interviews with investors – and found there were key differences in the crowd across the archetypes. We obtained data on six archetypes relevant to energy-access related crowdfunding (excluding Mega-campaigns, due to the limited number of relevant campaigns) and outline the key characteristics of each archetype on the following page.

Funder Profiles by Energy Access Crowdfunding Archetype

Model	Use	Respondent Profiles	Top 3 Motivations	Respondents from Platform
Donation crowdfunding				
Partnership model	Non-profits to supplement income through recurring campaigns	<ul style="list-style-type: none"> • Mostly female • University educated • One-off donors 	<ol style="list-style-type: none"> 1. To give back to a cause close to their heart 2. Because a close friend asked me 3. To help with disaster relief 	GlobalGiving
One-off fundraiser	Non-profits & social enterprises raising funds for a specific goal or initiative	<ul style="list-style-type: none"> • 80% male • High-income earners • Live in Kenya, USA • Average age 34 	<ol style="list-style-type: none"> 1. To help a specific community or project 2. To help a friend 3. Desire to give back 	M-Changa
Reward crowdfunding				
Aggregate network contributions	To formalise contributions from family and friends, network	<ul style="list-style-type: none"> • 69% male • 92% university educated • Non-profit & engineering main employment sectors • Wide age range; 30 – 39 yrs the most common (31%); >70 yrs (23%) 	<ol style="list-style-type: none"> 1. It is aligned with my personal values 2. Social impact 3. Environmental impact 	Pozible
Debt crowdfunding				
Microloan debt	Loans to entrepreneurs, typically originated via MFIs	<ul style="list-style-type: none"> • 47% female • 80% respondents >40 yrs • 85% respondents university education • Media & publishing the dominant employment sector • Respondents lived in Germany, USA 	<ol style="list-style-type: none"> 1. Help others & give back 2. It is aligned with my personal values 3. Social impact 	Kiva
SME loans	SME loans, typically working capital debt to companies pre-vetted by platform	<ul style="list-style-type: none"> • 79% male • Finance/banking dominant employment sector • Age groups varied across platforms; 32% to 60% respondents <40 yrs • 32% respondents earned \$35k - \$58k; 28% earned \$58k - \$88k • Respondents lived in Netherlands, Germany 	<ol style="list-style-type: none"> 1. It is aligned with my personal values 2. Environmental impact 3. Financial return 	Bettervest Lendahand TRINE
Equity crowdfunding				
Equity	Raises investment capital from a range of platform members, as well as the company's network	<ul style="list-style-type: none"> • 91% male; highest number of male respondents • 60% respondents had an income <\$65k) • Most respondents 30 – 39 yrs (38%) • 76% respondents lived in the UK 	<ol style="list-style-type: none"> 1. Financial return 2. It is aligned with my personal values 3. Environmental impact; Innovation factor 	Crowdcube

Some key findings from our research on the crowd include: :

- Donors on **donation**, partnership model, crowdfunding platform, GlobalGiving, were mostly women, aged 25 – 34 years with an undergraduate degree; they were mostly one-time donors and contributed around \$100 at a time.
- Donors to **donation**, one-off fundraiser, campaigns on M-Changa were mostly male (80%) and had an average age of 34 years. 42% had a university-level qualification, which was the lowest level of educational attainment across the six archetypes we explored. 67% had an income above the national GDP per capita in Kenya, where the platform is based.
- Respondents that had contributed to energy-access related **reward** campaigns on Pozible, that aggregate network contributions, had the highest level of educational attainment across all archetypes – 92% had a university level qualification and 15% held a PhD. 69% of respondents were male and 62% had an income above the national average in Australia, where the platform is based.
- Respondents that lent on microlending **debt** platform, Kiva, were more likely to be female than any of the other platform archetypes we surveyed (47% female/53% male).¹ Respondents were also older than on other archetypes – 81% were over 40 years – and the majority of respondents answered 'not applicable' when asked about their work, and entered manual responses which included manual responses of student and retired.
- Lenders on SME lending **debt** platforms – bettervest, Lendahand and TRINE – were predominantly male (79%) and had the highest percentage of respondents with a Masters degree (42%). Employment sectors were varied, although banking/finance/accounting had the highest representation (13%).
- Respondents that had invested in energy-access related **equity** crowdfunding campaigns were mostly male (91%). 35% of respondents earned £30k to £50k (~\$40k to \$67k) and 25% earned less than £30k (~\$40k); the average salary in the UK is approximately £28,000.² 48% of respondents were under the age of 40 and 71% of respondents had a university level qualification, which was the second lowest level of educational attainment of all archetypes.

We found that the **top three motivations** to participate in energy-access campaigns differed across the archetypes, although there were common themes across all respondents. 'It aligns with my personal values' was the most frequently cited motivation by all respondents, across all six archetypes. For one-off fundraisers on **donation** platforms, often used by start-ups raising seed capital, 'to help a specific community or project' was the most frequently cited motivation. Respondents were given a choice of twelve different motivations.

For **debt** crowdfunding, microlending platform respondents said their main motivation was 'to help others and give back', while for SME lending platform respondents the most frequently cited motivation was 'it is aligned with my personal values'. Perhaps unsurprisingly, 'financial return' ranked most highly for respondents from **equity** crowdfunding platforms. The most frequently cited challenge of participating in crowdfunding, across all types, was 'potential business failure'.

We found that the awareness and attractiveness of **interventions** – match funding, lump-sum payments, gift vouchers and first-loss guarantees – varied across the different platform types and archetypes, although it is important to note there is still much to be understood in this area of research. Our preliminary findings are:

- Match funding was the preferred intervention type for those that had contributed to a **reward** campaign, with over 90% of respondents (that were aware of the intervention) saying it was favourably perceived, created a sense of urgency, or increased the amount they contributed.
- Respondents from microlending **debt** platforms cited match funding (34% of respondents) and gift vouchers (28% of respondents) as the most popular choice of intervention.
- First-loss guarantees were the most popular intervention type for respondents from SME loan **debt** platforms, with close to 50% of respondents selecting this ahead of match funding (20%) and gift vouchers (18%). Almost 70% of respondents said the intervention deployed during the campaign they invested in positively influenced their decision to invest.

- The number of **equity** crowdfunding respondents to this question was small (~10), however we found co-investing through match funding and lump-sum 'investments' were the most favourably perceived amongst this group – particularly where the co-investor was a commercial one. We received mixed responses on the attractiveness of gift vouchers for equity crowdfunding investors, but some considered them a useful intervention for smaller ticket size investors.

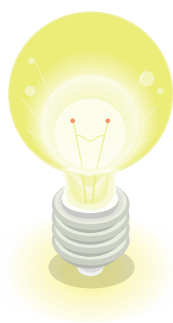
We did not assess the impact of the interventions on time to fund, or other indications of effectiveness, as this was out of scope for this research paper. This calculation can be complex given there are multiple variables that cannot be controlled for.

Overall we found a lower level of awareness of interventions – such as match funding, lump-sum payments, gift vouchers and first-loss protection – than we expected. A little over half of respondents recalled an intervention, however importantly the dataset includes donors and investors who could not have known about the intervention, for example where gift-vouchers were issued to new investors or where lump-sum investments were applied at a particular milestone.

There is still much to be understood in relation to the perception and impact of these incentives. Across all archetypes surveyed, respondents said:

- Match funding increased perceived 'legitimacy' and 'impact'
- Gift vouchers had perceived 'financial benefits'
- First-loss guarantees impacted both the decision to and the amount to invest.

We also found around 40% of respondents shared their crowdfunding activity on social media.



First-loss guarantees were the most popular intervention type for SME lenders, with close to 50% of respondents selecting this ahead of match funding (20%) and gift vouchers (18%).

2.0 INTRODUCTION



Crowd Power: Who is the Crowd? is the fourth in a series of five research papers published on crowdfunding for energy access ventures and projects in Sub-Saharan Africa and Asia. This paper is the first of its kind, exploring who is funding energy access crowdfunding campaigns on donation, reward, debt and equity platforms, and begins to explore the motivations for participating in energy access related crowdfunding campaigns.

The report begins with an overview of the Crowd Power programme, which this paper shares learnings from. Crowd Power is a UK aid funded programme designed to stimulate and research crowdfunding for energy access. We outline the progress of the programme, including the status of funding, the types of incentives deployed and the campaigns we have supported.

The following section explores who is funding energy access crowdfunding campaigns and why they fund them. Using data collected through surveys of members of the crowd, which contributed to various energy access related donation, reward, debt and equity campaigns, we provide insight into the profiles of donors, contributors, lenders and investors backing energy access related campaigns. Based on this data, which captures responses from over 900 participants, we also explore the motivations for funding energy access campaigns, as well as the crowd's perceived challenges and risks associated with respective crowdfunding types. For further information on data collection and analysis, please see Notes on Data Sources on page 47.

Next, we explore the nature and impact of various donor interventions on the crowd's behavior. We look at match funding, lump-sum payments, gift vouchers and first-loss guarantees, and their perceived role in shaping the crowd's behavior. The final section features interviews with members of the crowd that have funded energy access related crowdfunding campaigns. We explore who is participating in energy access crowdfunding and the reasons for their engagement in this niche area of crowdfunding.

Energy access crowdfunding is still at an early-stage and therefore there is limited data available on this segment of the market. Indeed, there is little publicly available data and research on the nature of the crowd and their motivations for engaging in crowdfunding generally; aside from research conducted by UK debt crowdfunding platform Ethex, which we draw on. This has made this report a particular challenge to put together. The evidence and analysis proposed in this paper draws on data compiled from over 900 individual respondents to an Energy 4 Impact conducted survey, however we must point out limitations in our data set. Around 95% of the respondents were sourced via our partnerships with a number of debt crowdfunding platforms, implying they had engaged in debt crowdfunding. Over half of the respondents had engaged in multiple forms of crowdfunding, however the questions asked pertain to a specific crowdfunding type.

3.0 CROWD POWER STATUS UPDATE

The Crowd Power programme began in April 2015 to research and stimulate energy access related crowdfunding. With funding from UK aid, Energy 4 Impact has supported over 250 energy access related crowdfunding campaigns on nine crowdfunding platforms. Supported campaigns have raised over \$5 million (£3.9 million) and utilized over \$600,000 (£470,000) in funding for various incentive types including match funding, lump-sum payments, gift vouchers and first-loss guarantees.

Donation



Reward



Debt



Equity

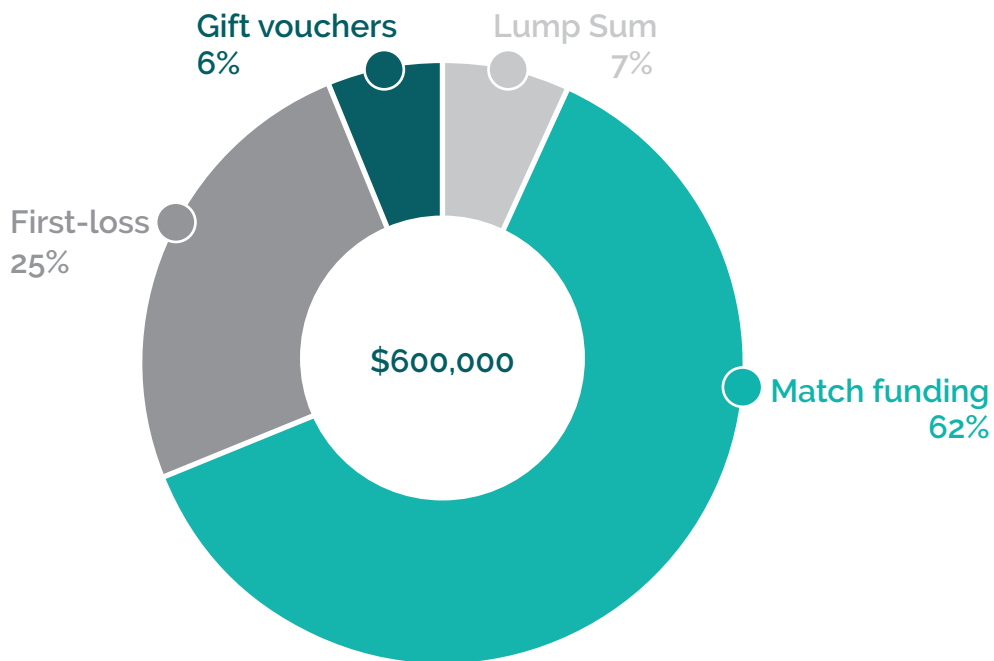


We have deployed over \$600,000 (£470,000) through four different incentive types:

- **Match funding**, which matches contributions from the crowd at a set amount e.g. dollar-for-dollar;
- **Lump-sum payments**, which are one-off donations, contributions, loans or investments into a campaign;
- **Gift vouchers**, which are vouchers that can be redeemed upon participation in an eligible crowdfunding campaign, and
- **First-loss guarantees**, which is a credit enhancement provided to lenders or investors to catalyse the participation of co-investors e.g. "the crowd".

For details on the role and impact of these different incentives please see section 5.0 *Do Incentives Impact Crowd Behaviour?* where we share data from our surveys of over 900 survey respondents, who have funded energy access related crowdfunding campaigns.

Crowd Power Total Spend by Incentive Type 2015 – 2018





BORROWER SNAPSHOT SOSAI RENEWABLE ENERGIES NIGERIA

Founder: Habiba Ali

Founded: 2010

Business model: SHS distributor

Platform: bettervest (Germany)

Capital Type: Debt

Amount Raised: EUR 112,000 (£125,000)

Raised: October 2017

Crowd Power Incentive Type: Gift Vouchers

SOSAI Renewables Energies Company (SOSAI) was founded as a social enterprise to provide affordable clean energy solutions to rural communities in Nigeria. To date they have distributed over 50,000 pico-solar systems and over 2,500 solar home systems. Prior to raising their first loan on the bettervest platform, SOSAI had raised two loans through Kiva, including a \$35,000 (£27,000) loan through their Direct to Social Enterprise (DSE) pilot. Since raising their first loan on bettervest, totaling €112,000 (£99,000), they have raised two subsequent loans totaling, all together raising almost €450,000 (£396,000). Crowd Power supported their first campaign on bettervest by providing gift vouchers to new investors such as a bonus €50 (£44) investment with every €150 (£132) invested. Gift vouchers were used as a method of investor outreach with the aim of attracting new investors to the platform through the support of this campaign.



BORROWER SNAPSHOT SOLARWORKS! MOZAMBIQUE

Founder: Arnoud de Vroomen

Founded: 2008

Business model: PAYG SHS manufacturer and distributor

Platform: Lendahand (the Netherlands)

Capital Type: Debt

Amount Raised: EUR 100,000 (£88,000)

Raised: October, 2017

Crowd Power Incentive Type: First-loss guarantee (25%)

SolarWorks! develop their products at the incubator at the University of Technology in Delft and distribute systems in Mozambique through a partnership with Vodacom. At the time of launching the campaign they had installed over 3,000 pay as you go systems in Mozambique. Their first campaign on Lendahand raised €100,000 (£88,000) to distribute 10,000 solar home systems. They have subsequently raised an additional €300,000 (£264,000) through two more loans on Lendahand, and an additional £150,000 on Energise Africa (Lendahand Ethex) in the UK. Crowd Power supported SolarWorks! first loan on Lendahand by providing a 25% first-loss guarantee on the loan, which acts as subordinate debt by taking the first-loss in the event of default. First-loss guarantees are used to reduce lenders' risk exposure and can be particularly effective when used for a first loan (or tranche), before a borrower has built a track record on the platform.

4.0 ABOUT THE CROWD

4.1 DONATION CROWDFUNDING FOR START-UPS AND PROJECTS

4.1.1 Who is the Crowd?

While a vast amount of research exists on charitable donations, there is little publicly available research on donation crowdfunding, let alone research on the crowd and their reasons for donating. Such data as exists is proprietary to individual platforms, and due to privacy considerations we have found it impossible to obtain a detailed data set examining the crowd and their motivation to donate. The data we obtained on donation crowdfunding was largely qualitative, sourced through the M-Changa platform based in Kenya, and included phone surveys with donors that had participated in energy access related crowdfunding campaigns. We also obtained an analysis from the GlobalGiving platform, which outlined the main trends they have identified through analysis of data on their donors. They were unable to provide direct access to the crowd or disseminate surveys due to privacy reasons. All respondents to the E4I phone survey were located in Kenya or the US. In previous papers we have outlined different donation crowdfunding models, which include both the:

- **Partnership model**, where grassroots organisations or social enterprises become a member of a crowdfunding platform and periodically raise funds on the platform; and,
- **One-off fundraisers**, where non-profits and social enterprises raise funds on a platform for a specific goal or initiative.

GlobalGiving, a partnership model platform, helps grassroots organisations to raise funds on a periodic basis once they pass their platform accreditation process. These grassroots organisations are mostly based in Sub-Saharan Africa, Asia and the South Pacific, while donors – the crowd – are mostly based

in North America and the UK. While GlobalGiving's user base is global and spans every age, region and profession, their largest 'minority subgroup' is women aged 25 – 34, based in the US, with an undergraduate degree. Most of their donations are one-off and average \$100.³

M-Changa, a Nairobi-based start-up, facilitates mostly one-off fundraisers for community projects, individuals and start-ups trying to raise funds for a specific cause. Both campaign-makers and donors are typically based in Kenya, and most donors utilise mobile money to facilitate the transaction. Our analysis of donors to Crowd Power-supported campaigns on M-Changa revealed these campaigns, supporting entrepreneurs and start-ups to raise seed capital from their networks, were atypical compared to the average campaign on the platform. The campaigns we analysed tended to be larger campaigns by start-ups raising capital for proof of concept or growth – and had an average size of \$17,000 with donations coming from local and international donors. The average campaign on M-Changa tends to be much smaller, averaging \$269, and less commercial, typically raising funds for personal and community causes. Respondents to our survey made an average single donation of over \$300. We found the average income of respondents was over \$60,000 p.a. (the median was \$7,750 p.a.); the average income in Kenya is around \$1,000 p.a. Almost half of respondents had postgraduate and/or undergraduate degrees. 80% of respondents to the M-Changa survey were male and the average age was 34 years. This may reflect the nature of these campaigns, by start-ups effectively raising seed capital through donation crowdfunding, and wider gender and age biases reflected in start-up communities globally.

4.1.2 Why does the crowd donate?

Existing research that addresses donation crowdfunding tends to combine donation and reward crowdfunding data into one dataset, which creates distortion, as it is more difficult to understand the motives of donors across these disparate crowdfunding types. Current literature suggests people donate on crowdfunding platforms:

1. Because they have a connection to one of the people seeking donations,
2. Because they want to be a part of something, be part of a group, and
3. Because they want to support efforts analogous with their beliefs.⁴

Source: Elizabeth Gerber, *Why Do People Give On Crowdfunding Sites?*

Data provided by GlobalGiving showed the three main motivations of donors on their platform were 'to give back to a cause close to their heart', 'because a close friend asked them to contribute' or 'to help with disaster relief'. GlobalGiving is different to many other donation (and reward) platforms in that donors often don't personally know the organisation or final beneficiary, although alignment with their own values and word-of-mouth play an important role. As one academic put it – "we vicariously want to experience what we already value".⁵ We were surprised however that most donors on the GlobalGiving platform were one-time donors. As GlobalGiving is a partnership model platform, where organisations run several campaigns each year we would expect a higher level of donor loyalty and affiliation with particular organisations. Crowdfunding can be an important tool to build a community of regular supporters – so engaging supporters on a regular basis through milestone updates and 'thank-yous' is crucial.

Interestingly, GlobalGiving shared that a lack of progress updates by the beneficiary was the most frequent complaint from donors, and we've seen across the crowdfunding landscape that this is imperative to keep and build a base of supporters.

Data from M-Changa respondents showed that the most common reasons to donate to energy-access campaigns by start-ups were 'to help a specific community or project' and 'to help a friend'. Like those reward campaigns, which aggregate contributions from family and friends, 'one-off fundraisers' on donation platforms are almost entirely funded by people within the fundraiser's network. This finding appears to be consistent with existing research, which finds that the motivations to donate are related to interpersonal connections between the donor and campaign-maker, as well as the communication style employed.⁴

Interestingly, we found that close to 70% of respondents from the M-Changa platform had donated to other campaigns on the platform, however we don't have data on the other campaigns supported to ascertain the reason for this trend. Although this indicates that donors on the platform may have already been active crowd funders when they made the donation. Only one-fifth of respondents had contributed to crowdfunding on other platforms – mostly reward platforms Indiegogo and Kickstarter. This compares with an average of 56% of respondents on all crowdfunding platform types we surveyed saying they had engaged with other crowdfunding platforms. This variation likely reflects the nature of the Kenyan crowdfunding market and also that platforms like Kickstarter and Indiegogo only accept credit card payments, which limits the degree to which donors from Sub-Saharan Africa can utilise foreign platforms.



Data from M-Changa respondents showed the most common reasons to donate to energy-access campaigns were 'to help a specific community or project' and 'to help a friend'.

4.2 REWARD BASED CROWDFUNDING FOR ENERGY ACCESS START-UPS AND PROJECTS

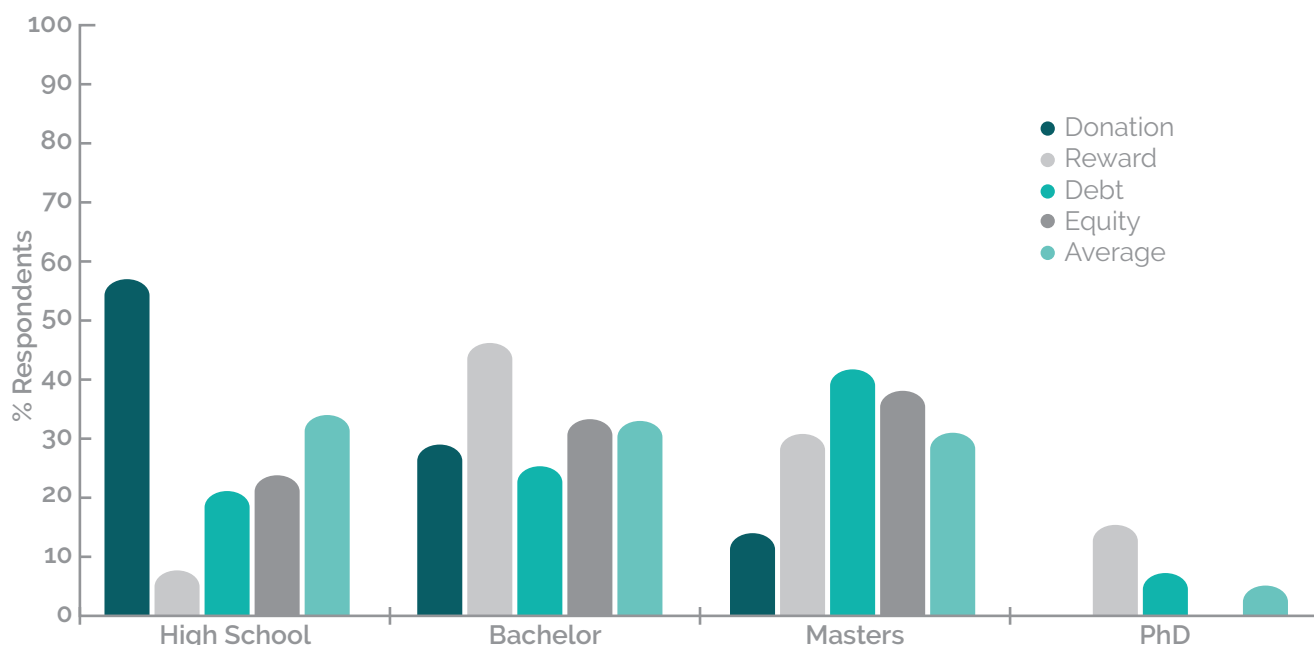
4.2.1 Who is the crowd?

There is little publicly available data on people who contribute to reward crowdfunding campaigns globally, although we know most crowdfunding platforms, campaign-makers and backers tend to be located in North America, Europe, Oceania and parts of Asia. Our research captures data from respondents from the Pozible platform, based in Australia, who contributed to one of two energy-access related campaigns on the platform. Both these campaigns were of the type that aggregates contributions from family and friends, and their extended network. In our previous Crowd Power paper, *Success and Failure: The Key to a Winning Campaign*, we outline the two primary reward campaign archetypes:

- **Aggregate network contributions**, which formalise contributions from family and friends, and the campaign-makers extended network; these campaigns typically raise \$10,000 to \$50,000, and
- **Mega-campaigns**, which are high profile campaigns that typically, raise funds for the development of a new technology; successful campaigns typically raise \$100,000 to \$400,000, although these campaigns are quite rare in the energy-access space.

We had fifteen respondents to our reward crowdfunding survey. We found reward crowdfunding respondents had the highest level of education of all respondents, across donation, reward, debt and equity platforms. Over 15% of respondents had a PhD, compared to an average of 5% across donation, debt and equity platforms surveyed; similarly, 8% of respondents cited high school, or other non-university level qualification, as their highest level of educational attainment, compared to an average of 34% of respondents across all platforms. The small sample means we are unable to draw any conclusions, however given the nature of campaigns that aggregate network contributions, the profile of contributors is likely to reflect those of the campaign-makers. It is also important to consider that it is not unusual for reward campaigns to evolve from an academic project or research. 70% of respondents to the reward crowdfunding survey were male and the most frequently selected sectors of employment were non-profits and engineering/architecture. Most respondents were aged 30 – 39 years and there were a surprisingly high number of respondents aged over 70 – almost one-quarter of all respondents, compared to an average of 2% across other platforms. Again this profile reflects the profiles of the campaign-makers – one an Australian non-profit sustainability advisory, and the other a start-up founded by two young Australian engineers.

Highest Level of Education Attainment by Platform Type



Of all platform types surveyed, we found respondents from the Pozible platform had the highest level of participation on other crowdfunding platforms with 67% of respondents using other crowdfunding types; the most common platforms used were other reward platforms, Kickstarter, Indiegogo and Chuffed (an Australian reward crowdfunding platform). Almost 60% of respondents had engaged in reward crowdfunding for the first time within the past 1 to 3 years and 67% of respondents had invested AU\$100 to AU\$500 (£56 to £282) in total. Two-thirds of respondents had contributed to three or more reward crowdfunding campaigns; one-quarter of respondents had invested in just one reward crowdfunding campaign.

4.2.2 Why does the crowd contribute?

Across all crowdfunding types we investigated respondents most frequently chose alignment with personal values as their motivation to donate, contribute, loan or invest via a crowdfunding platform.

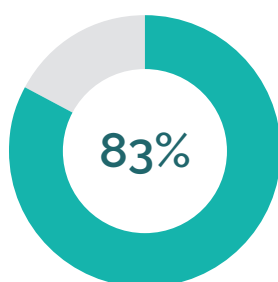
For reward crowdfunding respondents this was the number one motivation with close to 90% of respondents selecting 'it is aligned with my personal values' as their primary motivation, behind social impact and environmental impact. This suggests that campaign pitches need to tap into the target audiences' values. Our results are consistent with current research into reward crowdfunding, which proposes that people 'support efforts that are consistent with their identity'.⁵ This research also indicates that funders engage in crowdfunding to be part of a community and are 'motivated to connect and support others in their social network by helping them meet their goals'. We also found, through analysis of both donation and reward crowdfunding campaigns, that the majority of contributions are sourced from family and friends and first-degree networks, confirming the power of connection in motivating the crowd to contribute.



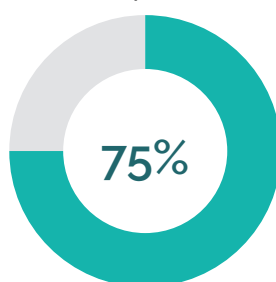
TOP 3 MOTIVATIONS

These are the top three motivations, identified by respondents to our reward crowdfunding survey, which informed their decision to contribute:

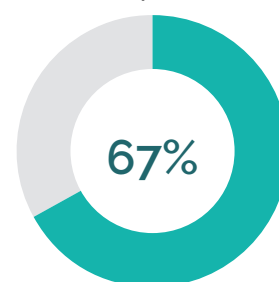
It is aligned with my personal values



Social impact



Environmental impact



Potential business or project failure, along with failure to deliver key milestones, was the most frequently cited challenge of contributing to reward crowdfunding according to respondents. The third most frequently identified challenge was 'being kept in the loop about progress', which is also one of the most frequently cited issues by donors on donation crowdfunding platforms⁶. None of the respondents to the reward crowdfunding survey had experienced 'non-delivery' of a reward; interestingly one-quarter of respondents did not know or couldn't recall if they had

received a reward. This response may reflect existing research that finds reward crowdfunding is motivated by both consumer as well as philanthropic behavior.⁷ Half of the respondents to the survey had contributed less than 25% of their total crowdfunding contributions to energy access related crowdfunding campaigns, while 40% of respondents had contributed more than half of all funds contributed via crowdfunding into energy access related campaigns – perhaps demonstrating the importance of value alignment and philanthropy as motivations to contribute.

4.3 DEBT CROWDFUNDING FOR ENERGY ACCESS MICRO-BUSINESSES AND SMES

The Debt Crowdfunding Archetypes

	Model	Description	Relevant Platforms
1	Microloan debt	Loans to entrepreneurs, typically originated via MFIs – usually around \$500 per campaign	Kiva, Zidisha, Milaap
2	SME loans	SME loans, typically working capital debt to companies pre-vetted by platform – usually upwards of \$50,000 per campaign	TRINE, bettervest, Lendahand, Kiva DSE

4.3.1 Who is the Crowd?

While there is a growing body of academic research on debt crowdfunding and the crowd's motivation, there is little available research on the crowd itself. UK impact investment and debt crowdfunding platform Ethex recently conducted research on investor interest in impact or 'positive' investing and interviewed a population sample in the UK. The views on impact investing were not limited to debt crowdfunding users or impact investing via debt crowdfunding platforms. Nonetheless, we find a number of similarities with their findings on demographics and motivations, including their finding that those participating in impact investing were 'significantly richer, better educated and more likely to be male'⁸ compared to the population as a whole. The lack of public data on the identity of debt crowdfunding lenders is perhaps due to privacy reasons as platforms must protect the identity of their lenders from third parties, and may not even be allowed to contact their own investors for data requests.

In previous papers we have explored the predominant archetypes of energy access related crowdfunding, and within debt crowdfunding we found two archetypes:

- **Microloan debt:** Loans to entrepreneurs, which are usually originated via a MFI or other financial intermediary that performs credit checks. Typical loan size is \$100 to \$1,000.
- **SME loans:** Loans to SMEs, usually working capital loans, which are often originated by the platform itself – this is essentially direct lending to SMEs and the platform is responsible for due diligence on the borrower. Typical loan sizes range from \$50,000 to \$1,000,000.



WHAT IS IMPACT INVESTING?

Synonymous with positive investing and social impact investing, impact investing refers to investments made into companies, organizations, and funds with the intention to generate a measurable, beneficial social or environmental impact alongside a financial return.

Source: *The Global Impact Investing Network (GIIN)*



Source: Kiva

As a last mile distributor, Azimuth Solar reaches customers underserved by the grid through an extensive network of community-based agents, making clean energy both affordable and accessible.

Azimuth Solar, Sierra Leone, raised a \$30,000 loan on Kiva and received dollar-for-dollar match funding from UK aid through Crowd Power.

These archetypes provide a helpful launch pad to explore the characteristics of the crowd. Our data shows that the average active lender on the world's largest microloan debt platform, Kiva, contributed around \$250 across all supported campaigns in 2016; while aggregated data from SME loan platforms, across the same period, shows an average investment of around \$2,000 over the year, per active lender. This may largely be explained by the fact that most microloan platforms (e.g. Kiva, Milaap, Zidisha) offer zero-interest to lenders – due to a number of factors, including securities law and transaction complexity, as well as the philanthropic nature of their activities – and lenders likely view their loan as akin to charitable giving. We also found that platforms focused on SME lending tend to have a small, but active, lender base that lends significantly more via the platform, on an annual basis, than on microloan platforms. Kiva had almost 600,000 active lenders on their platform in 2016, while the SME platforms we analysed had an average of 1,110 active lenders over the same period (bettervest, Lendahand, TRINE).

We also found that professions differed significantly between the two debt platform archetypes. 'Banking and Finance' was the predominant employment sector across all SME lending platforms. 'Education' was the primary sector for bettervest lenders, 'Banking and Finance' was secondary. 'Technology' was the primary sector for TRINE lenders, 'Banking and Finance' was secondary. 'Banking and Finance' was the primary sector for Lendahand, 'Consulting' was the secondary sector. The employment sectors for Kiva respondents were 'Media and Publishing' and 'Not Applicable'. Unfortunately the survey response options did not provide enough granularity, although we gather from manually entered responses that 'Not Applicable' included those that are unemployed, retired, studying or 'stay-at-home' parents. Despite the difference in profession, we noted little variation in income patterns across all debt platforms analysed and all platforms had a similar percentage of high-income earners⁹ (around 10% of respondents; compared to 3% to 8.5% of the general population in platform countries of registration).

SME Lending Respondents Dominant Employment Sectors



13%

Banking
Finance
Insurance
Accounting



9%

Education



9%

Technology



8%

Consulting



7%

Engineering
Architecture



7%

Government
Military

Microlending Platform Respondents Dominant Employment Sectors



15%

Not
Applicable



15%

Media
Printing
Publishing



9%

Technology



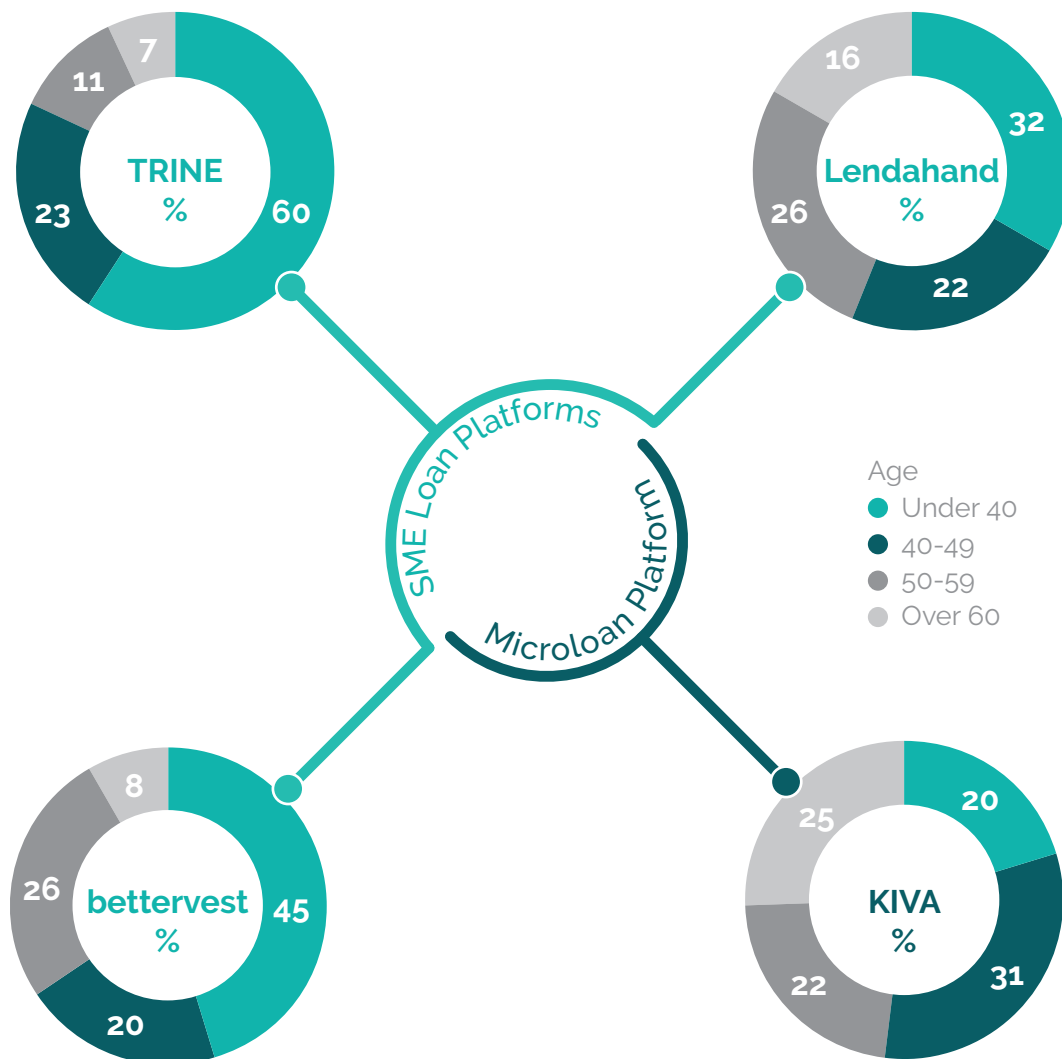
9%

Education

Demographic trends across the platforms we analysed show a key difference in the gender¹⁰ make-up of microloan platforms and SME loan platforms. On Kiva, 47% of respondents were female, and 53% of respondents were male. Whereas, over 80% of TRINE and bettervest respondents were male, and 70% of Lendahand respondents were male. Additionally, we found lenders on Kiva were older than those on SME lending platforms. Almost one-quarter of lenders on TRINE are under-30, while 18% of bettervest's lenders,

and 11% of Lendahand's lenders, are under-30. Less than 3% of Kiva's lenders are under-30. Data captured from Kiva respondents appears to be consistent with trends in charitable giving that show the likelihood of giving increases with age; although data from Kiva respondents also shows a more balanced gender composition (53% male, 47% female) than that indicated by existing charitable giving research, which suggests women are more likely to give to charity than men.¹¹

Age Distribution on SME and Micro-lending Platforms



This data provides interesting context as Kiva is often considered a quasi-donation platform; even though the platform facilitates loans, and borrowers are often charged interest, Kiva's lenders receive no interest at all. Further, Kiva itself is a non-profit organisation (relying largely on donations and lender contributions to sustain its operations) and does not earn a spread on interest charged to the borrower¹². The SME lending platforms, which respondents had used, on the other hand, are all for-profit entities and earn a

spread on the interest rate charged to the borrower to maintain operations. Lenders on these platforms also earn interest – which, in nominal terms, is well above central bank rates. Our data confirmed that lenders on zero-interest microlending platforms are more philanthropically motivated than those on the SME lending platforms, although lenders on SME lending platforms are strongly motivated by social and environmental impact, alongside financial return. Potentially, those lending on microlending platforms

see their activity as a quasi-donation while those using SME lending platforms view their activity as akin to savings or impact investment, where they may have more funds to deploy. This key difference may help to explain the different lender profiles.

4.3.2 Why does the crowd lend?

Existing literature on the crowd's motivations to participate in debt crowdfunding uses data from peer-to-peer lending platforms more generally, as well as a number of studies focused on motivations in 'pro-social lending' using data from microlending platform Kiva. There is little available public data on the crowd's motivations to lend to SMEs for a social or environmental purpose. Some inferences may be made from Ethex's research, which found 52% of the general population was interested in impact investment, of which 31% would be interested in making this investment via a peer-to-peer lending platform. The strongest motivators to engage in impact investment were:

1. Wanting to give something back to society
2. Part of my commitment to living responsibly
3. Being part of a group of people having a positive impact on the world

Source: Ethex, *Understanding the Positive Investor*

Research from peer-to-peer lending platforms shows that the information provided within the campaign page – in particular the image in the profile – has a strong influence on a lender's decision to invest. On these platforms, borrowers with 'social ties' are more likely to be funded and receive lower interest rates, although they are unlikely to perform any better *ex post*.¹⁶ Interestingly, this research (based on the borrower image and loan description) also indicates that expected returns of borrowers perceived as more 'trustworthy' are significantly higher than the average, and expected returns for borrowers perceived as more 'attractive' are lower than the average; borrowers perceived as more 'wealthy' does not appear to have a clear relationship with expected returns.¹⁷ This study demonstrates the importance of visual queues in shaping the lender's decision and may have some implications for socially oriented peer to peer lending platforms. Anecdotally, we understand that some loan profiles fund more quickly than others on Kiva –

based on gender, location and loan use.

Research on pro-social microlending also indicates that identity and perception of the borrower in the profile informs the lender's decision. Existing research, using data from Kiva, shows that pro-social lenders have similar biases common to venture capitalists – they prefer culturally similar and geographically proximate borrowers.¹⁸ However, researches also found there was a substitution effect whereby an increase in physical distance, between the lender and borrower, reduced the impact of cultural differences. Difference in GDP between a lender and borrower country was also found to have a positive impact on a lender's decision to support a campaign. Difference in language was found to have an insignificant effect, but possibly due to the fact that professionals conduct translations on the platform the dataset was sourced from (Kiva), minimising errors. Another important piece of existing research, which is consistent with our findings, is that profit and risk taking language in the profile decreases the attractiveness of microloans among pro-social lenders.¹⁹ This is consistent with our finding that 'to help others and give back to society' was the primary motivator for microlending debt crowdfunding respondents, and that 'financial return' was the second least cited motivation, behind religious beliefs (out of twelve options) on these platforms.

During our debt crowdfunding survey we asked respondents to select primary motivations for lending from a list of twelve. We found the primary motivator for lenders on our microlending platform partner, Kiva, was 'to help others and give back'. The next most popular choices were 'because it is aligned with my personal values' and 'social impact'. Other researchers into pro-social microlending have found that lenders prefer to support borrowers of the same gender or who hold a similar occupation,²⁰ or those that belong to a shared group, such as women in business, which may be easier to evaluate and with whom they can empathise.²¹ We found that respondents to our survey selected borrower specific factors less frequently – overtly, at least – like supporting a 'specific country or community' or 'entrepreneur or business'; these were ranked sixth and ninth out of twelve motivating factors.

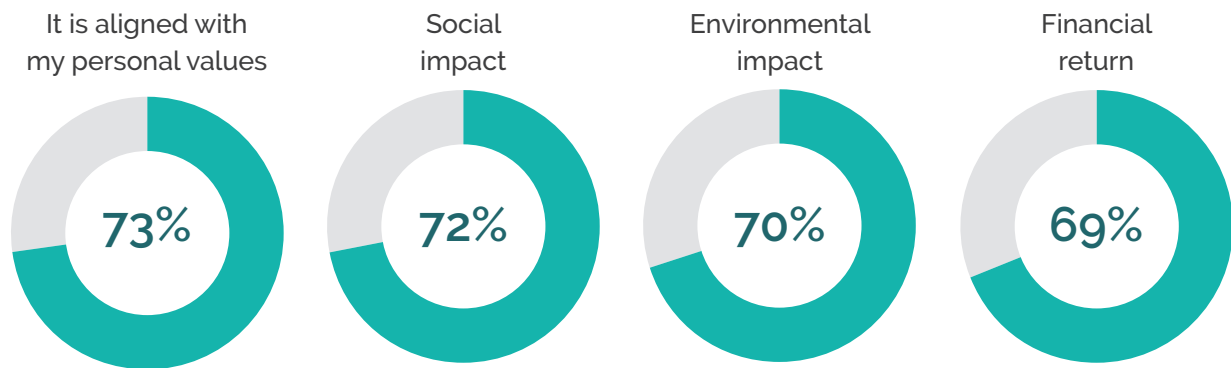


TOP 4 MOTIVATIONS

For both microlending and SME lending respondents the most frequently cited motivations were clustered, with the top four from each archetype winning by a wide margin – there were twelve motivations to select from.

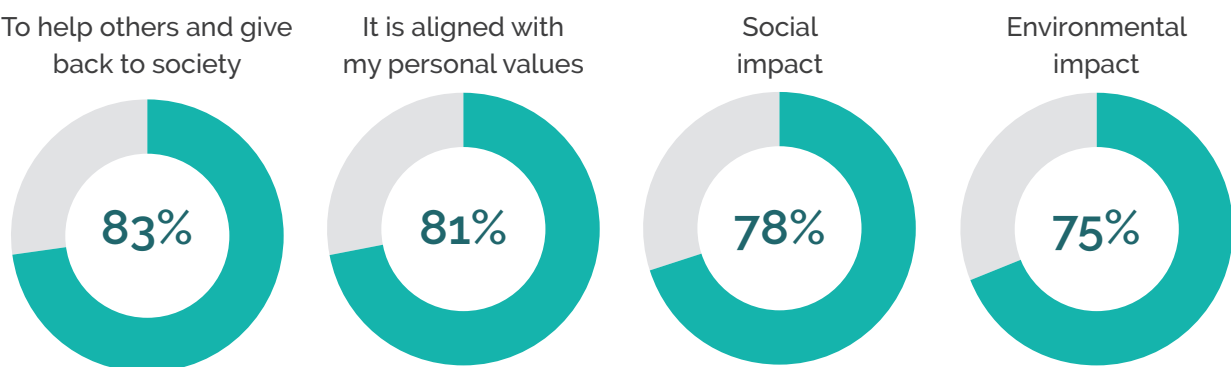
SME Lending

The top four motivations that informed their decision to contribute to a SME loan:



Microlending

The top four motivations that informed their decision to contribute on microlending platform, Kiva:



Earlier we noted the differences in lender profiles between platform archetypes – microlending and SME lending. Lenders on SME lending platforms tend to lend more than lenders on microlending platforms. Our analysis shows that the primary motivation for SME lenders is that the campaign 'aligns with my personal values'. Social impact, environmental impact and financial return, respectively, were the next most often cited by respondents from SME lending platforms. Respondents from both TRINE and bettervest, 'environmental impact' was the

most commonly cited motivation, by 87% and 84% of respondents respectively; 'It is aligned with my values' was the second most frequently cited on both platforms. 'Financial return' and 'social impact' were the primary motivators for Lendahand respondents. 'Financial return' ranked third for bettervest investors and fourth for TRINE respondents (out of twelve options). These motivations were related to the respondents debt crowdfunding in general, rather than specific to energy access related debt crowdfunding.

Unsurprisingly – as they are a niche platform – we found that TRINE lenders had the highest percentage of their debt crowdfunding portfolio invested in energy access related crowdfunding (63% of respondents had invested all of their debt crowdfunding portfolio in the sector). Lenders on the more sector agnostic SME lending platforms, like Lendahand and bettervest, were significantly less likely to have more than half of their portfolio invested in energy access related campaigns – only 15% of Lendahand investors had half of their debt crowdfunding portfolio in energy access related debt crowdfunding, while 50% of bettervest's investors

had invested over half of their portfolio in energy access related campaigns. The portfolio mix may be explained by the choice of campaigns on platforms, with some platforms, like bettervest, having a stronger pipeline of deals from the off-grid energy sector than others.

Respondents to our survey across both platform types consistently cited 'default risk' as the main challenge of lending via debt crowdfunding platforms, while 'potential business failure' and 'fraud' were the next most commonly cited challenges (out of nine options).

4.4 EQUITY CROWDFUNDING FOR ENERGY ACCESS START-UPS

4.4.1 Who is the Crowd?

Over 90% of respondents to our equity crowdfunding survey, which was sent to Crowdcube investors that had participated in an energy access equity campaign, were male, with around three-quarters of respondents based in the UK. The age of respondents was clustered in two main groups with 40% of respondents aged 30 to 39 years and around 30% of respondents aged 50 to 59 years – there was a significant drop in investors aged 40 – 49 (14%). Over 60% of respondents had an income below \$70,000 (£50,000); one-third of respondents had an income of

\$42,000 to \$70,000 (£30,000 to £50,000) per annum and one-quarter of respondents had an income below \$42,000 (£30,000) per annum. 5% of respondents had an income over \$210,000 (£150,000) per annum – the highest percentage of any other platform. Equity crowdfunding respondents ranking lower than average for level of education attained; 71% of respondents had completed a university degree. The dominant sectors of employment for respondents were Banking and Finance, Engineering/Architecture and Government/Military.



PLATFORM SPOTLIGHT CROWDCUBE WOMEN AND EQUITY CROWDFUNDING

While equity crowdfunding investors may be overwhelmingly male – only 24% of Crowdcube's 185,000 investor community are women and 30% of Seedrs's investors are female – the success rates for women-led campaigns is significantly higher than that of male-led campaigns. Data from the UK's largest and most established equity crowdfunding platform, Crowdcube, showed women-led campaigns had a success rate of 75%, while their male counterparts had a success rate of 55%. Since launching in 2011, 14% of successful pitches on the platform have been

by women. According to data from Beauhurst, which provides data and research on UK's start-up scene, in crowdfunding 8% of cash invested goes to women, while 2.7% of venture capital funding goes to women-led businesses. Research into reward crowdfunding identifies similar trends with research from PwC and the Crowdfunding Centre showing women-led campaigns are more likely to reach their fundraising target than male-led campaigns – although we still have a long way to go!

Source: Crowdcube blog, Women Unbound

Two-thirds of respondents to our equity crowdfunding survey started to use equity crowdfunding between 1 and 3 years ago, and almost one-quarter began investing 3 to 5 years ago. Over 80% of respondents had invested in more than 5 campaigns, potentially demonstrating diversification across a number of investments. Across all platform types surveyed 53% of respondents donated, contributed, lent or invested in over 5 campaigns; additionally, many of these respondents had been active in their respective crowdfunding categories for longer than those on

Crowdcube. Almost half of all investors on Crowdcube had invested over \$7,000 (£5,000) on the platform, with 43% investing \$1,400 to \$7,000 (£1,000 to £5,000). Almost half of the respondents had invested on another equity crowdfunding, typically on UK platform Seedrs. Two-thirds of respondents had seen no exit event and/or had not received dividends. One-quarter of respondents had received returns and/or dividends on their investment, and around 10% of respondents had lost money.

4.4.2 Why does the crowd invest?

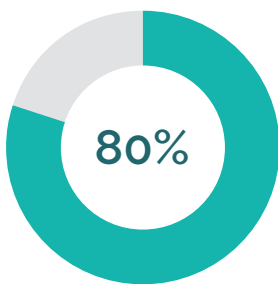
Perhaps unsurprisingly, we found the primary motivation for investment in equity crowdfunding campaigns was 'Financial Return', and by a significant margin, with 81% of respondents selecting this motivation. Remembering that we surveyed investors that had participated in fundraising rounds for energy access related businesses this may be seen as

evidence that energy access businesses can meet investor expectations and secure investment where there is a strong proposition. As we have seen across the various platform types, 'It aligns with my personal values' was an important motivation, with over half of respondents choosing this. 'Environmental Impact' was the next most cited motivation for investing in equity crowdfunding.

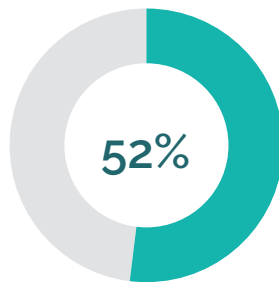


TOP 4 MOTIVATIONS

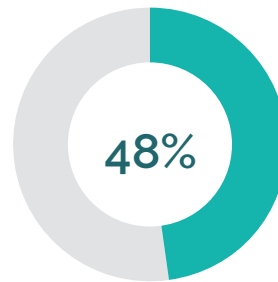
Financial return



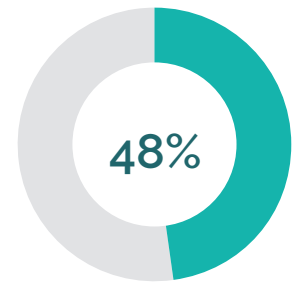
It is aligned with my personal values



Environmental impact



The innovation factor



The main perceived challenge, which we have found to be a challenge universally, across the various platform types, is 'Potential business failure'. The second most frequently cited challenge of equity crowdfunding respondents was 'Getting diluted in future rounds', followed by companies failing to deliver milestones. 'Foreign exchange risk' was the least often cited challenge of investing in equity crowdfunding. We found that, as well as half of our respondents investing in equity crowdfunding, two-thirds of respondents had utilised other crowdfunding types – donation, reward and debt crowdfunding. 57% of equity crowdfunding investors we surveyed had lent via debt crowdfunding platforms; 43% of those investors had made donations using crowdfunding platforms, and 43% of those investors had participated in reward crowdfunding. Respondents across all platform types we surveyed had a high level of participation across the crowdfunding platform

types with the majority of respondents engaging in other crowdfunding activities. Equity crowdfunding respondents had the lowest percentage of their funds in energy access related campaigns – with less than 10% of respondents allocating more than half of their portfolio to energy access. Over 80% of equity crowdfunding respondents had less than 25% of their portfolio in energy access related investments, compared to 46% of respondents across all crowdfunding types. This tells us that those engaging in equity crowdfunding are not investing in energy access specifically (although we are aware of syndicates focused on the clean tech sector only) and that the equity crowdfunding crowd may represent an untapped resource for energy access start-ups – with a compelling pitch! These are the top three motivations, identified by respondents to our reward crowdfunding survey, which informed their decision to contribute:

5.0

DO INCENTIVES INFLUENCE THE CROWD'S BEHAVIOUR?



The Crowd Power programme was designed to research energy access related crowdfunding and experiment with different intervention types – to test their use and effectiveness. Four incentive types were deployed over the course of the programme: match funding, lump-sum payments, gift vouchers and first-loss guarantees.



Match funding is used to match contributions or investments from the crowd. Funds are usually matched for a specific period of time, or up to a particular amount, in order to build campaign momentum. Match funding may be dollar-for-dollar (1:1) or less (1:2). Match funding is usually provided by a corporate, charity or government agency.

Case Study Sikubora Limited, Kiva Tanzania

In April 2017, Tanzania based solar home system distributor Sikubora raised a \$30,000 loan on microlending debt platform Kiva to distribute 100 solar home systems. UK aid matched each dollar lent by the 817 lenders that funded the loan, dollar-for-dollar, so \$15,000 was contributed by UK aid (via Crowd Power) and Kiva lenders contributed \$15,000. Match funding is added to the campaign in real-time.



Lump-sum payment refers to a one-off contribution to, or investment in, a particular crowdfunding campaign. The payment is often timed to the achievement of a funding milestone, such as when 50% of the campaign target has been raised. But it can also be provided as a 'corner stone investment' to get the campaign off to a solid start. A lump-sum payment is usually made by an investor, development finance institution or charity.

Case Study Musana Carts, Indiegogo Uganda, USA

Musana Carts, a start-up based in Kampala and San Francisco which has developed solar powered street vendor carts, raised over \$27,000 on reward crowdfunding platform Indiegogo as seed funding. Musana Carts had a campaign target of \$25,000 and when they reached the 50% raised milestone, UK aid, through the Crowd Power programme, provided a lump-sum payment of \$2,500 – effectively taking the campaign from 50% of target raised to 60% of target raised in an instant.



Source: Pawame

Pawame's solution and mission is a PAYG SHS that enables customers to immediately benefit from clean and affordable electricity, while building a credit history to unlock access to other life-changing products and services, like micro-insurance.

Pawame, Kenya, raised a €150,000 (£132,000) loan on TRINE and had a 50% first-loss guarantee from Crowd Power and solar manufacturer, Fosera.



Gift vouchers can be issued to existing or prospective investors in a number of forms, including a ‘no strings attached’ voucher in a specific denomination –e.g. \$25 – or a ‘bonus’ voucher tied to a contribution threshold – e.g. ‘if you invest \$75, we’ll give you \$25 towards the campaign’. A ‘voucher for a friend’ may also be issued to platform members after making a contribution or investment in a particular campaign. Vouchers are typically utilized to attract new platform members, or retain existing one, and are usually funded by a corporate or charity.

Case Study Olusheno Sales & Distribution Ltd, bettervest Namibia

In November 2017, Namibia based solar home system distributor Olusheno Sales & Distribution Ltd raised their third loan on German debt platform bettervest. The company raised €209,400 from the crowd in 51 days. bettervest issued vouchers to existing and prospective investors during the campaign, which were funded by UK aid. The vouchers provided investors with a ‘bonus’ upon investing, for example a €50 bonus investment when €200 was invested i.e. total investment was €250, of which the full amount is repaid to the investor (unless there is a default event).

Please note legislation in some jurisdictions restricts the use of gift vouchers for debt and equity crowdfunding as vouchers may be considered a form of financial promotion.



First-loss guarantee refers to socially- and environmentally-driven credit enhancement provided by an investor or grant-maker who agrees to bear first losses in an investment in order to catalyze the participation of co-investors that otherwise would not have entered the deal.

Case Study Touba Solar Rama, TRINE Senegal

Senegal-based solar home distributor Solar Touba Rama raised €32,000 in debt on debt crowdfunding platform TRINE in August 2016. UK aid provided a 50% first-loss guarantee to investors, protecting 50% of the amount invested. For example, if a €200 investment was made, €100 of the investment was guaranteed to be repaid. Due to operational issues, the borrower Solar Touba Rama was unable to meet their repayment obligations – although they partially repaid the loan. The 50% first-loss guarantee was activated so that investors received half their investment back, in addition to the repayments made by Solar Touba Rama. TRINE utilised an additional first-loss fund so that investors in the campaign receive the total sum of their investment back.

We believe our research is the first to explore the impact of particular interventions on the crowd's behavior and we are unaware of any existing literature exploring this subject. We asked survey respondents a series of questions to understand the impact of the various interventions, as well as the most popular incentive type in a given scenario. Clear patterns emerged in our research.

We asked respondents if they were aware of the intervention at the time of contributing or investing, if the intervention had influenced their decision to invest or contribute and what was attractive about the intervention. We also formulated a number of campaign scenarios to understand the crowd's reaction to particular stimuli.

Donation

We have limited data on the impact of interventions deployed via donation crowdfunding as we were able to obtain data from only one platform, Nairobi-based M-Changa, due to privacy considerations – and there is no known published research, which explores the impact of interventions on the crowd's behaviour. We found respondents to the donation crowdfunding survey had the highest level of awareness of the intervention than any other platform type. Almost three-quarters of respondents were aware that match funding was activated through their contribution.

Whereas across all platforms – donation, reward, debt and equity – only 45% of respondents were aware of an intervention being provided to the campaign such as match funding, lump-sum payments, gift vouchers or first-loss guarantees. However, our survey captured responses from those that had participated in a campaign with 'an intervention' – like gift vouchers – yet only a small percentage of lenders would have been aware of and redeemed the gift vouchers; we also included responses from individuals that had invested and contributed to campaigns with a lump-sum contribution at the 50% milestone so if they had made a contribution prior to that milestone they may not have been aware of the intervention. We therefore anticipate awareness levels were much higher among those that were exposed to the intervention. Further, we must consider the more covert role that these interventions play through increasing the campaign funding rate and the number of campaign funders – this impact may not have been acknowledged by participants.

We anticipate the higher level of awareness among donation crowdfunding respondents was due to the incentive type – match funding is a more overt incentive type than a lump-sum payment, which can easily be missed depending on the timing, or gift-vouchers, which may not be offered to all contributors to a campaign. Interestingly, not one of the donation crowdfunding respondents was able to identify the provider of the match funding. This may in part be due to the fact the provider of the intervention – UK aid – may not have been a known brand to contributors on the M-Changa platform as all respondents were domiciled in sub-Saharan Africa or the US. Although we did find that many respondents across the various crowdfunding types were unable to identify the provider of the intervention.

Reward

Respondents to our reward crowdfunding survey had all participated in campaigns that had match funding, yet only 39% of respondents were aware of the intervention and 31% of respondents were 'not sure' if the campaign they contributed to had match funding. The lower level of awareness may partly be due to the fact one of the campaigns respondents contributed to had match funding for a limited period of time, so those that contributed after the match funding had been exhausted may not have been aware of it. However, the match funding may have impacted their decision to contribute indirectly as it would have bolstered the campaign by increasing the percentage funded.

Around 20% of respondents that were aware of the match funding were able to identify UK aid as the provider of it, and another 40% of those respondents selected 'government' as the provider of the match funding – which is accurate given UK aid is the UK government's international development arm. 40% of those respondents said they didn't know who the provider was. The main reason the match funding was attractive to respondents was that it 'increased impact'.

Debt

We found that respondents across all surveyed SME lending debt platforms (over 850 respondents) overwhelmingly preferred a first-loss guarantee as an intervention – rather than match funding or a gift voucher. Around half of all respondents selected first-loss guarantee on all three platforms. Conversely, we found the majority of respondents from our microlending platform favoured match funding (34%), followed closely by gift vouchers (29%). We anticipate this is because respondents to our microlending survey were less likely to be motivated by financial return as those using SME lending platforms (financial return ranked 8 out of 12 motivations for microlending; and ranked 4 out of 12 for SME lending). We also tested for bias on SME lending platforms based on the incentive type respondents were most familiar with, based on the platform they utilized.²² We found that even for respondents that had utilised a different incentive type – e.g. gift vouchers – they still selected first-loss guarantee as their preferred intervention.

We also found that different interventions had different kinds of perceived attractiveness. For platforms that utilized first-loss guarantees we found the majority of respondents viewed this as attractive because it 'reduced risk'. For the platform that utilized only gift vouchers, we found respondents believed the intervention was attractive due to perceived 'financial benefits'. While for the microlending platform that utilised match funding, respondents found the intervention attractive due to perceived 'increased legitimacy'. This perception may be due to the structure of the intervention – as match funding does not benefit campaign backers directly – or it could be related to the motivations of backers on microlending platforms, which tend to be focused on helping others and giving back.

When respondents were asked if the intervention influenced their decision to lend, respondents from SME lending platforms tended to say the intervention had influenced both the decision to invest and the amount to invest (they invested more). An average

of 69% of respondents from SME lending platforms said the intervention – which was either a first-loss guarantee or gift voucher – impacted their decision to invest. Only 24% of respondents from the microloan platform, which utilized match funding only, said the intervention had impacted their decision to lend, with most answering that they would have 'contributed anyway'.

Respondents from our SME lending platform partnerships tended to recall the provider of the incentive more often than those on the microlending platform. Around 33% of respondents from SME lending platforms recalled that UK aid was the provider, while respondents from the Kiva platform thought the incentive was provided by a corporate or NGO. This may be because users of the Kiva microlending platform are familiar with match funding and there are many providers of match funding on the platform, through both corporate and non-profit partnerships (other match funding providers include PepsiCo, Hewlett Packard and Omidyar Network). The highest recall rate was on the TRINE platform, with 40% of respondents identifying UK aid as the provider. The platform also had the lowest level of 'I don't know' responses (20%) compared to other platforms where between 33% and 46% of respondents said they did not know who the guarantee provider was.

Finally, we found that lenders on the microlending platform we analysed were interested in a lower return-lower risk profile than respondents from the SME lending platforms. Given a range of scenarios with risk-adjusted returns, over half of the microlending platform respondents chose the low-risk, low return scenario and just 6% of respondents chose the high-risk, high return scenario. On SME lending platforms less than one-quarter of respondents chose the low-risk, low return option, and 24% of respondents chose the high-risk, high return option – with around half of respondents choosing the middle ground.

Equity

Data from our equity crowdfunding platform captured responses from investors that had contributed to campaigns with a lump-sum payment from UK aid, as well as campaigns that had no intervention at all. Just 9% of respondents recalled participating in a campaign, which had an intervention from a donor – bearing in mind the sample captured those that had participated in a campaign with a lump-sum payment and one that had not. While the sample size was much too small to draw any conclusions, we interviewed several investors that had utilized equity crowdfunding and asked them about their experience and views on different incentive types. The most common theme among those we interviewed was that a co-investment model is something familiar and could potentially be leveraged to provide cornerstone investment or bridge financing (through a lump-sum investment) at the 40% to 50% milestone, or through a match co-financing mechanism. Co-investment from a venture capital fund or corporate was considered the most effective.

We received mixed reactions from investors to gift vouchers, with one investor saying it was the most attractive option and another saying it was the least attractive (of match funding, gift vouchers, lump-sum payment/investment or first-loss protection). One investor suggested that vouchers wouldn't be interesting to professional equity investors, investing \$7,000 – \$14,000 (£5,000 – £10,000), but could be interesting for smaller ticket size investors. This may suggest that gift vouchers could be an effective way to increase participation of smaller ticket size investors, and new investors, in energy access equity crowdfunding. Equity investors tended to believe guarantees were effective in the context of debt and couldn't see a useful application in the context of raising equity.

6.0 Q&A: MEET THE CROWD

6.1 ELOISE – THE ENVIRONMENTAL LAWYER

Platforms GoFundMe (UK), Lendahand (UK)

Crowdfunding types Donation, Debt

Total donated and lent via crowdfunding \$1,700

Profession Environmental lawyer, working in the not-for-profit sector

Role Law and policy advisor focused on deforestation and sustainable land use

Education Masters of Environmental Law (LLM)

Lives United Kingdom

Age group 30 – 39 years

Investment Preferences

I am an 'ethical' investor, but also a relatively safe investor. I have invested £1,000 in debt crowdfunding, and prioritise investments in technologies that will help us move towards a greener economy. I invest my employee pension funds through a relatively ethical fund manager. For example, they do not invest in the fossil fuel industry. I also have investments in mutual funds, in a medium risk portfolio.

Q&A

Tell us about your crowdfunding activities to date.

I recently invested ~\$1,400 (£1,000) in Azuri Technologies, to supply small solar home systems to families in Kenya. This was my first investment on a debt crowdfunding platform. I invested through a campaign on the Lendahand UK (i.e. Energise Africa) platform. Prior to this, I used donation crowdfunding predominantly, using platforms such as GoFundMe. I've donated to homelessness charities, to help friends with expensive medical treatments, that kind of thing. I also helped a friend publish his first children's book via crowdfunding – it's now got a sequel and a play! These donations are generally around (\$70) £50.

What are your motivations for donating and investing in crowdfunding campaigns? How do you decide which campaigns you will donate to or invest in?

My main motivation is to generate a more positive impact with my savings, particularly looking at environmental protection and social development. We know that many investment funds are still investing in fossil fuels, weapons manufacturing and

other industries that are damaging our planet. The divestment movement shone a light on the positive changes that could be made when moving away from these industries. Investing ethically in these specific projects goes beyond that which I can dictate when saving with a big bank and I feel more in control about where my savings are targeted and what my money is able to improve.

Why did you invest on Lendahand? What are the advantages and disadvantages of using this platform?

The main financial advantage is the higher interest rate compared to leaving money in a standard bank savings account – I receive a 5% p.a. interest rate on the platform. The environmental advantages are also important to me. I wanted to invest my money in a company that is achieving positive change. Investment is an underutilised mechanism to effect change that people often don't think or know about. The main disadvantage is the risk of losing the money. However, in this case, I have known of Azuri Technologies since 2012 as I work on issues of renewable energy and development.

I feel very positive and confident about the impact that renewable solar energy systems can have on communities, and I also know that most small loans that are granted to households, to install a solar power system, are paid back on time – therefore making this a safe investment.

Q Have you contributed to campaigns with match funding or first-loss guarantees? Did the match funding or first loss guarantee influence your decision to lend to the particular campaigns?

The campaign I supported is sponsored by UK aid, which allows the crowd investors to take on a senior debt position. UK aid will be the last investor to be repaid, reducing my risk. The first-loss guarantee made me more comfortable investing in Azuri Technologies relative to other options that did not have this type of guarantee. I haven't invested in a campaign with match funding.

What do you think are the main challenges and risks associated with donation and debt crowdfunding?

For debt crowdfunding, one of the challenges is deciding which crowdfunding investment to choose – one that is reliable and a good investment, in both the financial and moral sense of the word. There is so much choice, that it can be overwhelming. There's also the risk that you support maladaptation with poorly designed projects, that do not actually achieve the environmental or social goals they aim to support or that result in dependence on aid by the communities they affect. For donation crowdfunding, I sometimes feel uncomfortable about the quality of the safeguards that are in place to ensure my donation is really going towards my chosen charitable aim. This is why I generally only donate when someone I know is running the crowdfunding campaign.



Source: Energise Africa

Investment is an underutilised mechanism to effect change that people often don't think or know about.

Eloise, an investor in Azuri Technologies' first campaign on debt platform Energise Africa

6.2 BRIAN – THE RENEWABLE ENERGY PROFESSIONAL

Platforms Indiegogo, TRINE

Crowdfunding types Reward, Debt

Total invested/donated via crowdfunding \$1,000

Profession Environmental professional working in the offshore wind industry

Role Mid-management

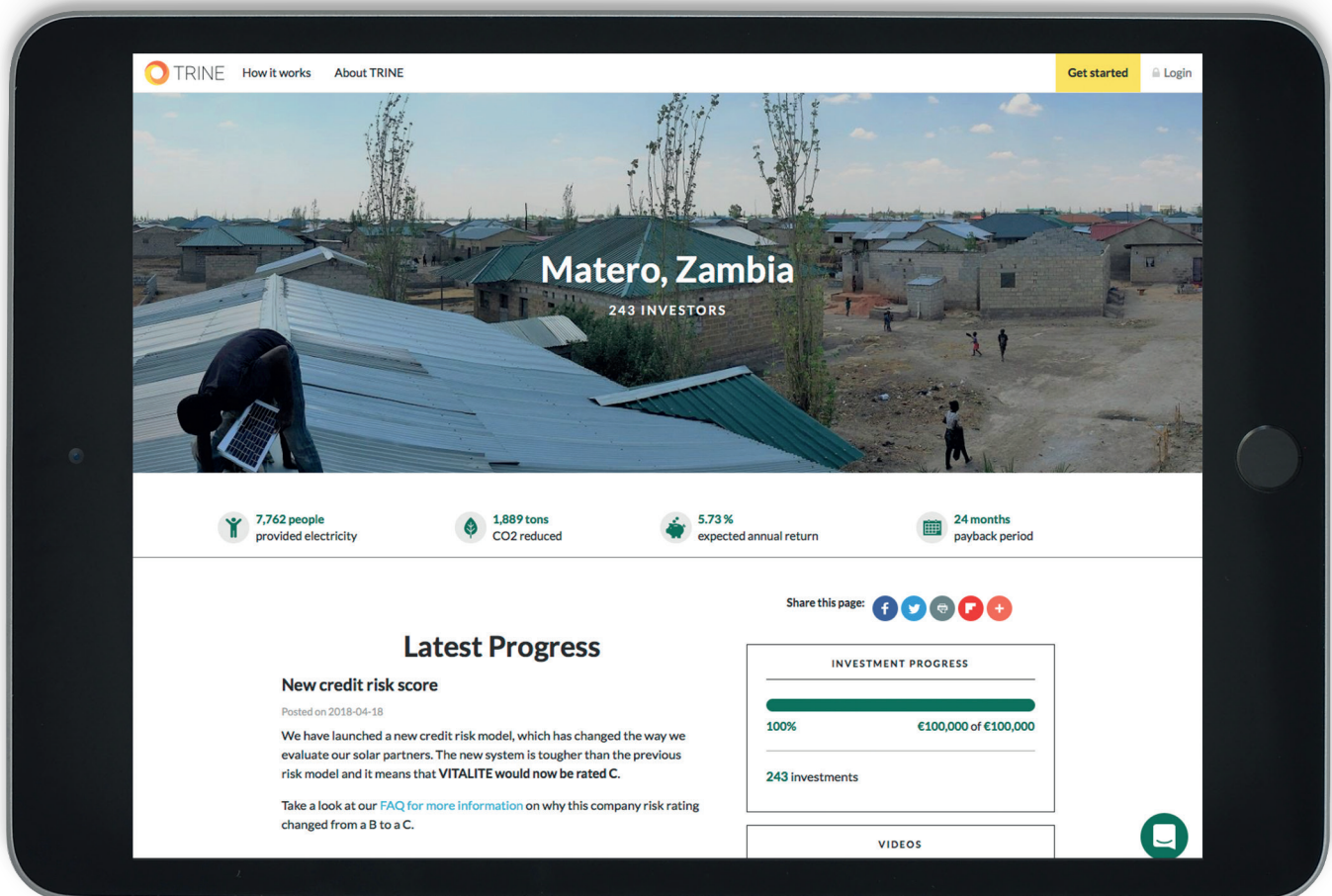
Education MSc Ship Science, Naval Architecture and Marine Engineering

Lives United Kingdom

Age group 30 – 39 years

Investment Profile

Brian is an 'ethical' investor and invests his employee pension funds through an ethical fund manager, in their riskier investment option – the "adventurous portfolio" – with a 90% allocation to global equities. He invests around 5% of his income in shares and tends to prioritise investments in renewable energy.



Source: TRINE



The main challenge is to know which platforms to pick and trust... referrals from friends, colleagues and family are very important to vet the plethora of platforms

Brian, an investor in Vitalite's first campaign on debt platform TRINE

Q&A

Tell us about your crowdfunding investments to date.

I made my first investment through a crowdfunding platform a few months ago through TRINE, which gave a €100,000 (\$123,000) loan to a solar company called VITALITE in Matero, Zambia. I lent €250 (\$310) and I've just started receiving repayments. I also contributed to a reward campaign on Indiegogo, by a start-up called KORKO, and pledged €450 (\$557) to pre-order a surf board made of recyclable material as a birthday present for my girlfriend – it was delivered on time and to budget.

Have you considered making investments in equity crowdfunding?

I considered investing in an equity crowdfunding campaign for a wind kite technology, but I decided not to do so in the end, as I didn't feel I knew enough about the market opportunity, and the equity crowdfunding platform terms and conditions – although this is a market I am keen to learn more about and invest in the future.

Have you considered making donations through crowdfunding?

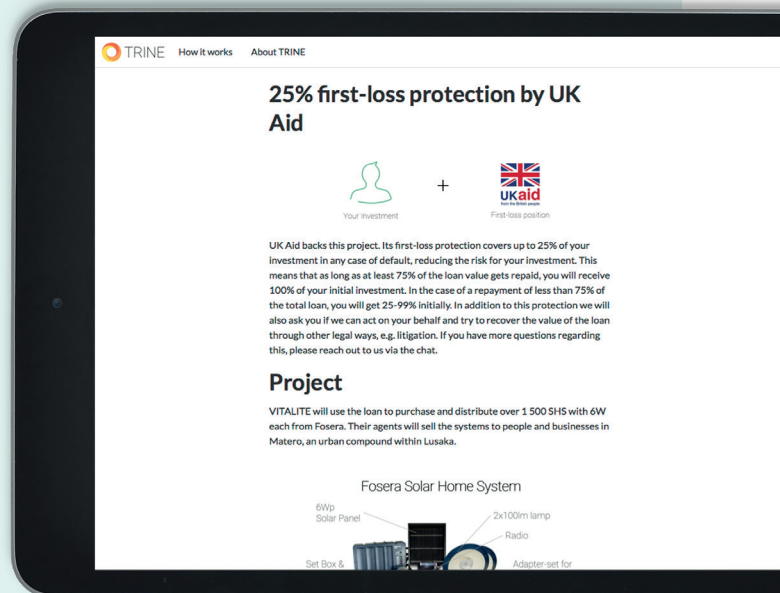
No, I haven't contributed to any donation crowdfunding campaigns to date.

What are your main motivations for investing and contributing through crowdfunding?

My main motivations to invest through debt crowdfunding – and potentially equity crowdfunding in the future – are mainly financial, to make decent levels of return (>5% p.a.) compared to keeping my money in my savings account and getting very low returns below inflation! I aim to build a balanced portfolio to lower overall risk and potentially increase my returns. I also try to take advantage of tax incentive schemes such as the ISA [Individual Savings Account in the UK], which is offered by some platforms. I would invest in equity crowdfunding to increase my portfolio share of higher-risk projects, potentially making higher returns, or higher losses!

Why did you invest in the TRINE campaign?

The main driver when picking the VITALITE campaign was to achieve a good financial yield (5.73% p.a.), while contributing to a project with high social and environmental impacts – bringing solar lights and energy to Zambia. I was positively predisposed to making an investment in Zambia as I spent a holiday there



previously, and I hope go back to Zambia and visit Matero when all of the 1,500 solar home systems will be deployed.

Why did you contribute to the Indiegogo campaign?

My main motivation for contributing to the campaign on Indiegogo was to have early access to a cool and exclusive product, not available on the market – a surfboard made of recycled organic fibres instead of synthetic ones. And to be able to surprise my girlfriend for her birthday by giving her the most unique present!

What do you think are the main challenges and risks associated with crowdfunding?

The main challenge is to know which platforms to pick and trust. It's very hard to invest through a platform you have never heard of; referrals from friends, colleagues and family are very important to vet the plethora of platforms operating in the market. I heard about TRINE through a colleague, which gave me confidence to invest in the Matero campaign, although TRINE was still a relatively young platform with no established track record. The fact that the project was supported by UK aid also gave me an extra level of confidence as I thought the project would have gone through an extra level of vetting from the UK government. The biggest risks with debt crowdfunding are business failure and loan default, and for this campaign these risks were partly mitigated by UK aid providing a 25% first-loss guarantee. For reward-based crowdfunding the main risks are business failure, the non-delivery of rewards and potential delays.

6.3 THIJS – PROPERTY SURVEYOR AND SOCIAL INVESTOR

Platforms Indiegogo, Doorgaan.nl, Geldvoorelkaar, Symbid, Lendahand

Crowdfunding types Reward, Debt, Equity

Total donated and invested via crowdfunding
~\$75,000

Profession Building compliance advisor and surveyor in housing sector

Role Consultant, Business Owner

Education Masters of Science in Civil Engineering

Lives the Netherlands

Age group 40 – 49 years

Investment Profile

Direct investments via crowdfunding make up around 15% of my investments and I have shares in Lendahand itself. My largest investment is in real estate in the Netherlands and I have other private investments as part of my company's investments. I try to do good across my portfolio. I bank with a green bank and even my work in real estate is focused on affordable student housing, it's not purely commercial.

Q&A

Tell us about your crowdfunding activities to date.

I started about 5 years ago and my first investment was through Netherlands-based platform, Geldvoorelkaar. They were still early stage and had only started the year before so I was careful with how I invested funds. I made eight or nine loans through the platform, mostly to individuals running small businesses, and two of these loans failed which was disappointing. I contributed to a reward campaign in the Netherlands, which was for a social enterprise that planned to train people with disabilities in shoemaking, and backers received a pair of shoes in return.

I also invested in a few businesses through equity crowdfunding on Symbid. One investment was in a local bookstore that had gone broke; the crowd saved it and now I have shares in my local bookstore, which is nice. The largest investments I've made have been on the Lendahand platform, also based in the Netherlands – they lend to emerging market based SMEs. I invested in their first projects and their founder, Peter, called me one day to ask if I wanted to invest in the platform itself. I am now a shareholder of the Lendahand platform, with a 6% shareholding.

How do you decide which campaigns you will invest in? What are your motivations?

Of course I want to make a good financial return, but the campaigns I invest in really have to do something extra – something that does good and that will help people. Social impact is important to me, even

more so than environmental impact – investing in people first helps the environment anyway. I don't really invest on Geldvoorelkaar or Symbid anymore; almost all of my investments are through Lendahand.

I invest in different capacities on the platform – for me personally, on behalf of my company, and for my nephew – so my choices depend on whom I'm investing for. For my nephew I tend to go for lower risk loans with longer tenures. When investing on behalf of my company, which is also part of my retirement savings, I take more risk. If I am investing personally, as I am also a shareholder of Lendahand, I often go for the campaigns that are not that popular on the platform to help get them up to the 50% raised mark.

You have invested in energy access related campaign on Lendahand, can you tell us about your reasons for investing in these campaigns?

I have invested in a lot of crowdfunding campaigns on the platform, maybe eighty or more – I reinvest the principal and interest paid. In the beginning I invested small amounts in many campaigns and now I invest larger amounts in fewer campaigns. I am not particularly focused on solar or renewable energy; I just like to divide my investments across the different platform partners so I am not reliant on just one middleman [Lendahand sources many of their loans through intermediaries such as MFIs].

I invested in two solar loans, which were direct loans to companies in Uganda [SolarNow] and Mozambique [SolarWorks!], and also to a biogas company in Tanzania [SimGas]. I funded the biogas company because I had been to Cambodia and I saw how the technology worked, I knew the potential impact of biogas on communities. I also saw it wasn't appealing to investors and I like to pick up the ones that don't go fast. I invest in everything, there's nothing on the platform I would exclude from my investments. I also like special ones, like Kwale Coconut Processors, where the somewhat strange subject of the investments makes me invest.

Q What do you like about investing via Lendahand?

I just like the way it works, the whole thing. I want to make a good return but I also want to do something good with my money. I don't believe in giving money away, although I realize it's important in particular circumstances. I would rather help somebody to find a job or build a business, than give a handout. I take the same approach with donations in the Netherlands – such as the social enterprise I funded, which gave funders a pair of shoes made by the trainees under the programme.

Q What do you think are the main challenges and risks associated with using crowdfunding as an investment?

For equity crowdfunding, I found Symbid had limited transparency. I funded three projects on the platform and there was hardly any feedback on the investment or on how to sell shares. If I invested in the future it would really need to be someone or something I know. My experience with debt crowdfunding on Geldvoorelkaar was not very good either. They had a good track record when I started lending, but they were booming at that time and I think they ended up lending to companies they shouldn't have. Two of the loans I invested in defaulted (out of eight or nine). They subsequently tightened the rules – but I think if it looks too good, it probably is! I look at the risk and return profile and make a call. Generally, I think greed is the biggest challenge for investors! Interest rates are extremely low at banks – 0% on some savings account in the Netherlands – and investors are chasing returns. On Lendahand, the high interest loans are gone in minutes. I think a lot of people do not know the risk they're taking or how to discern the risk adequately. And many people might make emotional decisions, based on the feel of the investment, despite higher risk.



Source: Lendahand

Of course I want to make a good financial return, but the campaigns I invest in really have to do something extra – something that does good and that will help people.

Thijs, an investor in multiple campaigns on debt crowdfunding platform Lendahand.

6.4 WILL – THE ANGEL INVESTOR AND LAWYER

Platforms Crowdcube

Crowdfunding types Equity

Total invested via crowdfunding \$8,360

Profession Legal professional

Role Senior Management

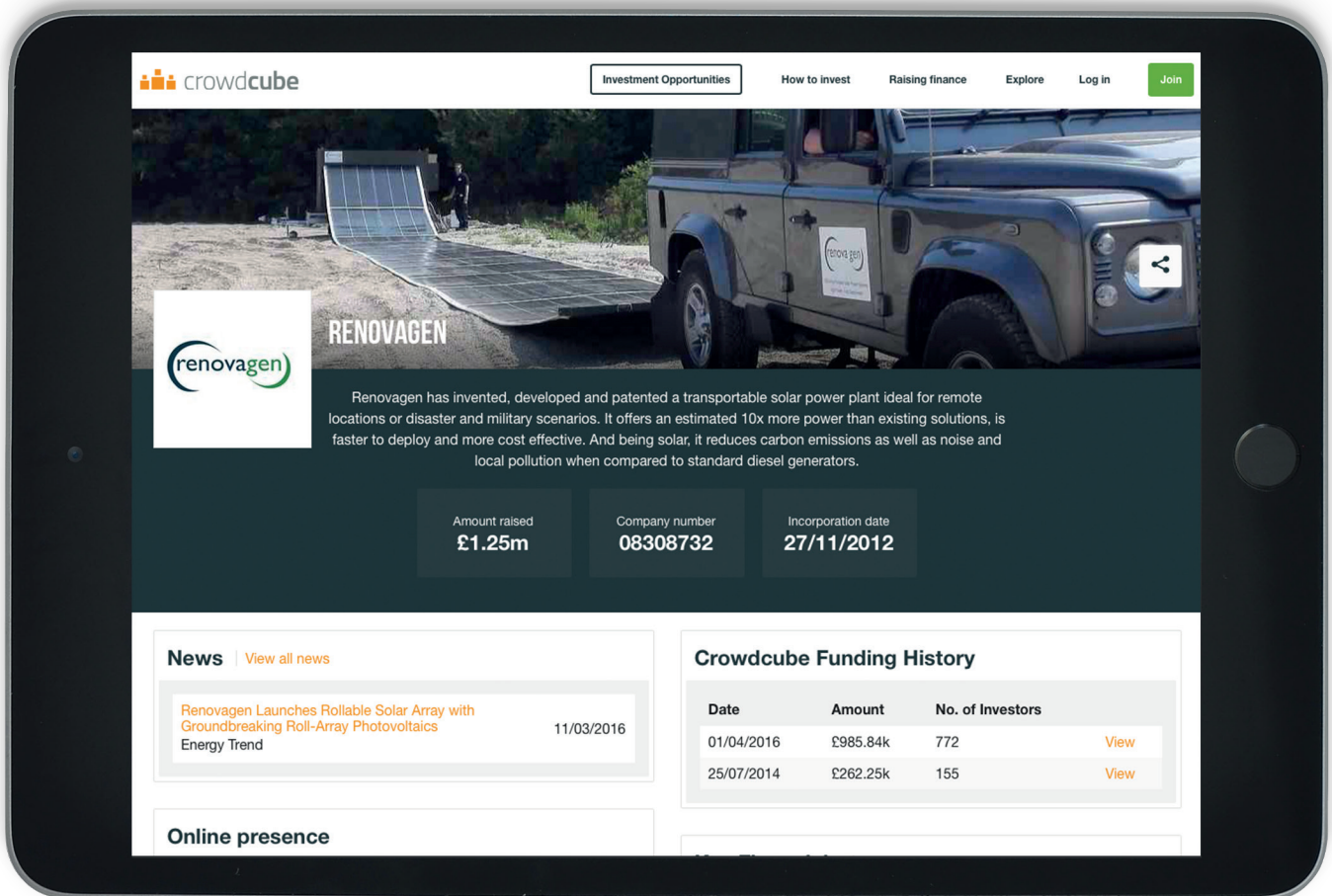
Education BA Environmental Sciences and Law

Lives United Kingdom

Age group 40 – 49 years

Investment Profile

Will invests his pension through ethical investment fund options and has also invested in four clean energy ventures through equity crowdfunding. He hasn't invested via debt, donation or reward crowdfunding – although he is considering contributing to reward crowdfunding in the future.



Source: Renovagen



Q&A



Tell us about your crowdfunding investments to date.

I have invested £6,000 (\$8,360) in six crowdfunding campaigns on Crowdcube since 2015. My portfolio includes:

- An investment in **Renovagen's** second campaign on Crowdcube. Renovagen has developed and patented a portable, off-grid solar energy system up to 10 times more powerful than existing solutions, which has been successfully demonstrated with NATO and is designed to be used in hard to reach locations such as disaster zones.
- Investments in two rounds for **POD Point**, a UK company supplying electric vehicle charging solutions to drivers and businesses, which has shipped more than 20,000 charge points and provided over 10 million miles of electric motoring.
- An investment in **Witt Energy**, a venture that has developed a patented energy harvesting technology that converts motion on land, sea and air into electricity.
- An investment in **Pavegen**, a technology that converts footsteps into electricity to power services in high-footfall locations and provide real-time data for analytics.
- An investment in **Powervault**, a UK-based solar PV and battery storage technology company that can supply solar energy during peak-demand and provide emergency power during black outs.

These crowdfunding investments haven't made any returns to date nor have there been speculations of exit events yet, but it is still early days.



What are your main motivations for investing through equity crowdfunding?

My main motivation is to support companies in the clean energy sector, developing climate-change related technologies. My drivers are very venture-specific, and depend on what the company is trying to achieve and their potential for success – which is reflected through the management team's strength and their links with industry. I saw a lot of potential in the solar array system developed by Renovagen for off-grid applications – and I liked that my investment could have a very good social impact in developing countries, and for disaster relief applications – that was definitely an added bonus. Some of my

investments are more commercial than others. POD Point is at a later stage of commercial development than other companies in my portfolio; they have established ties with automotive manufacturers and are closer to market. Some of my investments are more 'speculative' in their nature – Witt Energy is at an earlier stage with no customers to date, but the company has established links with research centres and universities, and a strong management team, which gives me confidence in their potential.



How did you decide which platform to invest through?

I decided to invest through Crowdcube as they are one of the earlier platforms in the market with the best reputation and track record – and they have a large number of clean energy and climate change-related ventures compared to Seedrs and Syndicate Room [the two most established platforms in the UK, after Crowdcube].



Did tax relief have an impact on your decision to invest?

Tax benefits [in the form of SEIS or EIS tax relief] didn't affect my decision-making process, although I claimed tax relief on relevant campaigns. I would have invested the same amount in the same companies, even without these tax benefits – I only invested as much as I was willing to lose.



You mentioned you considered investing in the Buffalo Grid campaign – were you aware of UK aid providing a lump-sum payment and did this impact your decision?

I considered investing in the Buffalo Grid campaign but I decided not to do so in the end. I wasn't aware of the UK aid funding; I probably didn't see the announcement. Had I known about it, this would not have changed my mind and pushed me over the line as I would have perceived a UK aid contribution as an "investor of last resort", equivalent to a "speculative R&D grant". I would have preferred to see a corporate or financial investor, like a VC fund, providing co-funding alongside crowdfunders, as this would have sent a stronger market signal and would have increased my confidence in the commercialisation path of the venture.



What do you think are the main challenges and risks associated with equity crowdfunding?

I haven't experienced many challenges when investing through crowdfunding because of my legal and financial background. I imagine some less experienced investors could struggle to analyse all the information available to them on the platform, but I think Crowdcube does a very good job at providing detailed company information and clear

summaries – and the online discussion board, where prospective investors can ask questions to the management team is very useful. The main risk of equity crowdfunding is business failure and loss of your investment, which is why I only invest as much as I am willing to lose. The only thing that could be improved is to make the payment options clearer from the outset as there are many options available with different fee levels.



Source: Buffalo Grid

I would have preferred to see a corporate or financial investor, like a VC fund, providing co-funding alongside crowdfunders, as this would have sent a stronger market signal and would have increased my confidence in the commercialisation path of the venture.

Will, an investor in multiple cleantech equity crowdfunding campaigns.

7.0 CONCLUSION

The crowd supporting energy access campaigns varies across each of the six archetypes we analysed for this report. We find that even within different crowdfunding types, such as donation and debt crowdfunding, there are subtypes that have their own unique campaign characteristics and participant profiles. For example, philanthropically motivated donation (e.g. partnership model) and debt crowdfunding (e.g. microlending) are more likely to be funded by women. Commercially oriented donation (e.g. one-off fundraisers by start-ups) and debt crowdfunding (e.g. SME lending) is significantly more likely to be funded by men. 80% of respondents from these two archetypes identified as male.

The motivations of donors and investors also differed between the archetypes. The primary motivation of donors using partnership model platforms was 'to give back to a cause close to their heart'. Donors that contributed to one-off fundraisers, usually by a start-up, were motivated 'to help a specific community or project'. Respondents that had contributed to reward campaigns, which aggregate network contributions, said their motivation to contribute was because 'it is aligned with my personal values'.

Respondents from microlending platforms were motivated 'to help others and give back'. The most popular motivation for respondents using SME lending platforms was 'it is aligned with my values'. 'Financial return' was the most frequently cited motivation by respondents that invested in a energy-access related equity campaign. Importantly, the average individual investment on Crowdcube, the platform respondents had used, is almost \$5,000 – significantly higher than the next highest average of around \$475 per individual investment on SME lending platforms.

A summary of the archetypes we analysed and our findings are below.

The Six Archetypes

Model	Description	Respondent Profiles	Top 3 Motivations	Preferred Incentive	Average Contribution on Platform
Donation crowdfunding					
Partnership model	Non-profits to supplement income through recurring campaigns	<ul style="list-style-type: none"> • Mostly female • University educated • One-off donors 	<ol style="list-style-type: none"> 1. To give back to a cause close to their heart 2. Because a close friend asked me 3. To help with disaster relief 	Not available	Not available
One-off fundraiser	Non-profits & social enterprises raising funds for a specific goal or initiative	<ul style="list-style-type: none"> • 80% male • High-income earners • Live in Kenya, USA • Average age 34 	<ol style="list-style-type: none"> 1. To help a specific community or project 2. To help a friend 3. Desire to give back 	Not available	Not available
Reward crowdfunding					
Aggregate network contributions	To formalise contributions from family and friends, network	<ul style="list-style-type: none"> • 69% male • 92% university educated • Non-profit & engineering main employment sectors • Wide age range; 30 – 39 yrs the most common (31%); >70 yrs (23%) 	<ol style="list-style-type: none"> 1. It is aligned with my personal values 2. Social impact 3. Environmental impact 	Match funding	\$66 Source: Pozible
Debt crowdfunding					
Microloan debt	Loans to entrepreneurs, typically originated via MFIs	<ul style="list-style-type: none"> • 47% female • 80% respondents >40 yrs • 85% respondents university education • Media & publishing the dominant employment sector • Respondents lived in Germany, USA 	<ol style="list-style-type: none"> 1. Help others & give back 2. It is aligned with my personal values 3. Social impact 	Match funding	\$252 per annum (no data on each contribution) Source: Kiva
SME loans	SME loans, typically working capital debt to companies pre-vetted by platform	<ul style="list-style-type: none"> • 79% male • Finance/banking dominant employment sector • Age groups varied across platforms; 32% to 60% respondents <40 yrs • 32% respondents earned \$35k - \$58k; 28% earned \$58k - \$88k • Respondents lived in Netherlands, Germany 	<ol style="list-style-type: none"> 1. It is aligned with my personal values 2. Environmental impact 3. Financial return 	First-loss guarantee	\$478 Source: bettervest, Lendahand, TRINE
Equity crowdfunding					
Equity	Raises investment capital from a range of platform members, as well as the company's network	<ul style="list-style-type: none"> • 91% male; highest number of male respondents • 60% respondents had an income <\$65k • Most respondents 30 – 39 yrs (38%) • 76% respondents lived in the UK 	<ol style="list-style-type: none"> 1. Financial return 2. It is aligned with my personal values 3. Environmental impact; Innovation factor 	Lump-sum payment	\$4,966

Source: E4I Survey M-Changa, Pozible, Kiva, bettervest, Lendahand, TRINE, Crowdcube

Our research shows that energy-access 'crowdfunding' is even more nuanced than we understand, and that there is still much to discover. There are clear differences in the profiles and motivations of the crowd across the six archetypes we explore. This report only captures data from respondents that participated in energy-access campaigns and we anticipate there is far more nuance across crowdfunding as a whole. We also observed distinct differences in the profiles of respondents from platforms of the same archetype, showing each platform has a unique following. For example, 60% of respondents from SME lending platform TRINE were aged under 40, while only 32% of respondents from another SME lending platform Lendahand were aged under 40.

Interestingly, we found relatively high variations in level of education across the different archetypes. We found that respondents from reward platform Pozible, based in Australia, had significantly higher education levels than any of the other platforms - 15% held a PhD and only 8% had no university level qualification. We found respondents from equity crowdfunding platform Crowdcube, based in the UK, had the second lowest level of education across all platform types - 29% of respondents had no university level qualification. Although both platforms had a limited sample (combined total of approximately 50) this finding would be interesting to explore more broadly in crowdfunding research.

Our research into the role and impact of different incentive types – match funding, lump-sum payments, gift vouchers and first-loss guarantees – shows these incentives have different perceptions on different platform archetypes.

- **Match funding** appears to be preferred by respondents from donation and reward crowdfunding, as well as philanthropically motivated microlending platforms.
- Respondents that had invested in energy-access equity campaigns suggested co-investments in the form of match funding or a **lump-sum investment**, where provided by a commercial investor in particular, send a strong positive message to potential investors.
- We were unable to test the perception of gift vouchers across the archetypes as **gift vouchers** were only used on SME lending debt crowdfunding platforms, although we found a high level of usage and leverage when used effectively on SME loan platforms. Responses from our equity crowdfunding survey suggest gift vouchers may be effective for attracting smaller ticket size investments.
- SME debt lenders overwhelmingly favoured **first-loss guarantees**.

We found 56% of all respondents that had donated or invested in energy-access campaigns had also engaged in other forms of crowdfunding. Mostly, we found the donor's or investor's contribution to energy access campaigns represented less than 25% of their total contributions to crowdfunding. The only platform this was not true for was TRINE, a dedicated off-grid solar SME lending platform. This finding implies that energy access crowdfunders may not be a niche group and that, in fact, most donors, contributors, lenders and investors engaging in energy access crowdfunding are sector agnostic – this is good news for campaign-makers in this space as 'the energy access crowd' might be much larger than we think!

NOTES ON DATA SOURCES

The research findings are based on the following numbers of responses for each funding type:

1. Donation crowdfunding

- We conducted phone surveys with 15 individuals who had contributed to one of four energy access crowdfunding campaigns supported by Energy 4 Impact on the M-Changa platform.
- GlobalGiving was unable to contact their donors to disseminate the survey due to privacy considerations. Instead they provided macro-level analysis they had conducted on the profiles and motivations of those making donations on their platform.

2. Reward crowdfunding

- We received 15 responses to an online Typeform survey of contributors from the Pozible platform, which had contributed to one of two energy access crowdfunding campaigns supported by Energy 4 Impact.
- We also conducted phone interviews with 3 people that had contributed to reward crowdfunding campaigns.

3. Debt crowdfunding

- We received 852 responses to an online Typeform survey sent out to lenders which had contributed to energy access related campaigns on Kiva, bettervest, Lendahand and TRINE.
- We also conducted phone interviews with four people that had lent via debt crowdfunding.

4. Equity crowdfunding

- We received 22 responses to an online Typeform survey sent out to equity investors that had invested in one of two energy access campaigns on the Crowdcube platform.
- We also conducted phone and in-person interviews with seven individuals that had utilized equity crowdfunding.

The sample size for donation, reward and equity are small and this should be taken into consideration when reviewing the findings. In the case of debt the sample size was large enough to provide statistically credible data. Sampling was from investors who had supported one or more campaigns supported by the Crowd Power programme.

We also examined relevant academic literature in the context of each crowdfunding type. Other data was obtained through interviews with platforms and members of the crowd, through our partnerships and through our work supporting off-grid energy businesses on the ground in Kenya, Tanzania, Rwanda, Uganda, and Senegal. It is also important to note that, after a competitive process, UK aid and Virgin Unite provided a grant to a Lendahand-Ethex joint venture, 'Energise Africa', which established an energy access debt crowdfunding platform in the UK, with project implementation managed by Energy 4 Impact. We feature an interview with one of their investors in this report.

1. We were unable to conduct a survey of GlobalGiving donors due to privacy considerations.
2. <http://www.ons.gov.uk/ons/rel/ashe/annual-survey-of-hours-and-earnings/2014-provisional-results/stb-ashe-statistical-bulletin-2014.html#tab-Key-points>
3. Data was obtained from the GlobalGiving platform and respondents were not given the same 12 choices respondents to the E4I survey were given.
4. Data provided to E4I by the GlobalGiving platform
5. Gerber, E. 'Why do people give on crowdfunding sites?', MARKETPLACE, January 11 2013, <https://www.marketplace.org/2013/01/11/your-money/why-do-people-give-crowdfunding-sites> (accessed March 30, 2018)
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12. Individuals earning above \$100,000 or €100,000 on respective platforms.
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25. Some platforms use other incentive types more than others. For example, bettervest utilized Crowd Power funding exclusively for gift vouchers, while TRINE has deployed all four incentive types.
28. Data was obtained from the GlobalGiving platform and respondents were not given the same 12 choices respondents to the E4I survey were given.