Economic Analysis of Shelter's Foundations First Project

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Summary

This paper presents an economic analysis of a Shelter project, Foundations First, which is designed to stop at-risk households from becoming homeless. We do not believe there is enough data for a full cost-benefit analysis, so this was not carried out. Instead, we conducted a break-even analysis to show the minimum amount of benefits to society the project would need to make, in order cover the costs of the project.

We calculate the total economic costs of Foundations First as £1.04m over the life of the project (for those costs we can monetise). Using estimates from the literature on the costs of homelessness, we estimate Foundations First would have to prevent 24 households becoming homeless for a period of 12 months, compared to a counter-factual of no project, in order to break-even.

Using data from the project's first year of operations, we conduct some rudimentary analysis that suggests the project may already break even in its second year, and therefore may already be providing a net benefit to society.

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1. Introduction

Foundations First (FF) is a project being run by Shelter, a charity organisation, in Paisley and surrounding areas in Scotland. The project aims to support households which are at risk of becoming homeless. FF officers supply a holistic package of guidance, advice and support to households, aiming to remove or ameliorate the underlying household-level factors which cause a risk of homelessness. Clients can self-refer to FF, or may be referred by charities, the local authority, or other organisations. Clients of FF may be supplied with: support in accessing local housing services or in finding suitable accommodation; help to access public health or social services, including treatment for issues of addiction or mental health; support in placing children in full time education; guidance on household budgeting; and direct donations of useful items, such as furniture or clothing. The project does not provide financial support to clients.

This note provides a break-even analysis (BEA) of the conditions under which FF will generate benefits to society which outweigh its costs. That is, it calculates the number of households for which FF would have to help prevent homelessness, in order for the total benefits to society to be greater than the running costs of the project. As we do not have enough data to estimate a robust counterfactual, a full cost-benefit analysis is not attempted. However, initial data from the first year of the project's operations are used to provide an estimate of the likely effects of the programme. This allows us to comment on whether FF is likely to reach its break even conditions.

The analysis finds that FF must prevent roughly 24 households from becoming homeless over the period 2016-2020 in order for its societal benefits to outweigh its costs.

2. Economic Costs of Foundations First

In economic terms the "cost" of FF is not simply the amount of money spent on it. Rather, it is the total monetary value of all resources needed to run the project. This includes those resources received by Shelter for free, such as volunteer hours and donations of materials. The reason these resources are included in our estimate of cost is that if these resources were not employed on FF, they could conceivably be used for other productive purposes.

Discussions with FF staff indicate that inputs used by the project comprise:

- Funding from Shelter
- Funding from a donor organisation
- Inputs of volunteer time
- Donations of materials from other organisations

Information on total funding to be received by FF in each year of the project was supplied by Shelter in project documents.

Shelter colleagues also supplied a record of volunteer hours supplied over a 3 month period (May-July 2016), by role, along with estimates of the hourly rates each of these staff would be paid by Shelter if they were employees. We have assumed that this 3 month period is representative of inputs of volunteer hours over the project as whole. That is, we have assumed that volunteer hours in 2016 are equal to (Total hours over 3 months recorded) x 4. We have also assumed that volunteer hours will scale up and down with the level of activity on FF. That is, in later years, when FF funding drops, the number of volunteer hours used will drop in the same proportion. As the months from which this data is drawn are early in the programme cycle, they may not be representative of the number of volunteer hours which the program settles at over the long term. This should be examined further in future analysis.

Discussions with staff indicate that donations of furniture, food and clothing are received, and in some cases solicited directly by FF staff in response to the needs of clients. For example, discussions with Shelter colleagues noted that another charity had donated furniture, which FF gave to a client, allowing her to stop renting furniture and helping her to pay rent. This might be a cost to the partner: if they are running a charity shop in which they could have sold that furniture, they have incurred a cost to themselves by donating it to Shelter instead. So the sales value of the furniture is a cost of the FF programme. We have been unable to monetise the value of donations of materials to the FF project. Information on these inputs is not recorded systematically. As we do not include the value of these items, our estimate of the total costs of FF is an underestimate. The total cost of the FF project is found by monetising each of these inputs, and adding together. Our estimate of the total economic cost of the FF project is then derived as in the table below.

Table 1 – Economic costs of Foundation First Project (2016 £'s)

	2016	2017	2018	2019	2020
Staff Salaries	190,944	190,944	203,126	154,374	102,234
Training & Development	7,128	7,128	7,271	5,621	2,688
Communications	1,118	1,118	1,140	865	578
Stationary	2,560	2,560	2,612	2,256	2,885
Central Support Functions	26,800	26,800	27,642	20,593	13,567
Private Tenants Forum	1,294	1,294	1,320	1,346	-
Irrecoverable VAT	1,362	1,362	666	286	152
Volunteer Expenses & Marketing	10,000	10,000	-	-	-
Volunteer Inputs	9,921	9,921	10,027	7,705	3,900
Donations of materials					
Total (undiscounted £)	**251,127**	**251,127**	**253,804**	**193,046**	**126,004**
Discount Rate		3.5%	3.5%	3.5%	3.5%
Total (discounted £)	**251,127**	**242,635**	**236,929**	**174,116**	**109,805**

The **total financial cost** of the FF project is estimated at **£1.075m** over the period 2016-2020. Finally, programme costs are transformed into net present value terms. Future costs must take progressively less weight in calculations as they occur farther in to the future: an amount of money today is worth more than the same amount tomorrow (e.g. because it can be invested today at positive interest rates, or because benefits expected in the future are not guaranteed to occur). Thus, costs are discounted into present value terms, using a discount rate, that is, an estimate of the rate at which society is willing to trade present benefits for future benefits. Following Treasury Green Book guidance[1], a social time preference rate (STPR) of 3.5% is used. The total **net present value** of the FF project is estimated at **£1.04m.**

3. Economic Costs of Homelessness

The major benefit of the FF programme is the amount of money saved by those cases of homelessness which FF prevents. Homelessness imposes a range of costs, including those to the homeless person, and the costs to society of providing services which homelessness creates a demand or need for. The various costs created by homelessness may be listed as[2]:

- **Homelessness services:** The financial cost of providing specialist, specific services that are targeted on preventing, reducing or mitigating the effects of homelessness.
- **Health and social services:** Some homeless people may use health or social services more frequently than other groups and they may develop illness and disability at an earlier age than housed people. People living rough may be more likely to use emergency medical and psychiatric services than the general population.
- **Criminal justice costs:** Some groups of homeless people may be more likely to have frequent contact with the criminal justice system, for example because of offences associated with drugs and alcohol.
- **Loss of economic productivity:** Homelessness can be associated with long-term unemployment and being unable to engage in paid work. This represents a loss of economic productivity to society.
- **Economic effects associated with visible homelessness:** There is a belief that visible rough sleeping is detrimental to trade, tourism and sometimes to societal cohesion.
- **The costs of homelessness for people who experience it:** Homelessness can have negative long term social, economic and health consequences for those who experience it.

[1]The green book is a document from the Treasury providing guidance on how to appraise the value of policies or projects before investing in them. https://www.gov.uk/government/publications/the-green-book-appraisal-and-evaluation-in-central-governent

[2] European Observatory on Homelessness (2013) - The Costs of Homelessness in Europe

A recent review of literature concludes that there are a limited number of studies estimating the direct costs of provision of services intended to prevent homelessness, but little quantification of the costs of services which are supplied as an indirect result of homelessness (e.g. justice system services) or of broader economic consequences of homelessness (e.g. loss of productivity)[3]. Most estimates of the costs of homelessness focus on health, social and justice services provided. We use such estimates in this paper. Because the estimates used do not include any estimate of the losses of economic productivity, economic spillovers, and long term costs for those who experience homelessness, the figures used for costs of homelessness are underestimates.

The costs of any individual case of homelessness will vary substantially. The cost drivers for a case of homelessness include:

- The extent and form of accommodation supplied via public service
- The quantum and form of health services supplied
- The extent of any criminal activity undertaken while homeless
- The extent and range of social services accessed
- The length of time of homelessness
- The age of the homeless person (as the loss of economic productivity will likely be higher for young persons than for those who are closer to the end of their working lives).
- The number of persons made homeless

Given the large number of cost drivers, and the resulting wide variance in costs of homelessness, studies on this topic do not typically generate average costs for cases of homelessness. Rather, they work to generate typical individual "cases" of different types of homelessness, and estimate the costs of these. The estimates of the costs of different cases of homelessness we have located in relevant literature are:

- **European Observatory on Homelessness (2013) -** The Costs of Homelessness in Europe – Includes UK specific estimates of the costs of three cases: total public expenditure to support a chronically homeless single man in his 40s with a history of living rough, mental health problems and drugs and alcohol use for one year via homeless shelters; The same individual spending a year in supported housing. It also includes an estimate of the cost of supporting a young mother with two children in emergency / temporary accommodation.
- **New Policy Institute (2011)** – How many, How Much? Single homelessness and the question of numbers and cost – includes estimates of the cost of 6 different cases of individual homelessness, of varying lengths.

Each of these costs estimates is first transformed into a cost per annum, by multiplying by *(number of months of the cases)/12*. Figures in euros are translated into pounds using the annual average GBP/EUR exchange rate for the year of the study. Estimates are then transformed into 2016 prices, by applying UK CPI inflation

[3] European Observatory on Homelessness (2013) - The Costs of Homelessness in Europe, p.45

rates since the data of the study. Finally, as information is not available by which to judge the relative "frequency" of each of the cases costed, the median of the per annum costs of each case is used as a best estimate of the average cost of an individual case of homelessness, lasting for 12 months, in 2016 prices.

One additional complication is that these estimates are each for individual cases of homelessness, but FF staff have indicated that they typically support family units. A case of a family becoming homeless will both increase the average cost of homelessness (as average costs per family are very likely to be greater than the average cost of an individual), and is very likely to increase variability of cost (as the volume of services required is likely to have more variance). The disruption to economic productivity is likely to also be greater, as children who are not in fulltime education may become less productive or able to engage in work for the remainder of their lives.

Unfortunately, the FF project does not systematically collect data on the number of people, their ages or income / employment status in the households they support. For analysis, we have aimed to locate estimates of the costs of homelessness for an average sized family unit. Where costs are available only for individual cases, we translate these into costs for a family by multiplying by the average household size as recorded in the last Scottish census. This was 2.19. The use of this method assumes that the cost of a case of homelessness is the same for a child as for an adult. This is unverified, but may be reasonable: homeless children may have lower costs to society for accommodation and justice services, but higher costs in terms of lost productivity.

This method yields an estimate of the cost of an average case of homelessness of circa £20,600 per person per annum in 2016 prices, or £45,200 per household per annum. For analysis of future years, these figures are also discounted by a social time preference rate of 3.5%.

4. Break Even Conditions for Foundations First

The Break Even Condition

Having estimated programme costs, and the costs of a "typical" case of homelessness lasting 12 months, we can now estimate the number of cases of homelessness which the FF project must prevent in order for its social benefits to outweigh its costs. The table below shows the calculations, concluding that over its lifetime, FF must prevent roughly 24 cases of homelessness lasting 12 months between 2016 and 2020 in order to justify its costs. Note that this is 24 households, not 24 individuals.

Table 2 – Break Even Rate of Foundations First

	2016	2017	2018	2019	2020	Total
FF Total Costs (Discounted)	£251,127	£242,635	£236,929	£174,116	£109,805	£1,014,613
Median costs of homelessness (Discounted)	£45,176	£43,648	£42,172	£40,746	£39,368	£42,222
Break even rate	6	6	6	4	3	**24**

Note also that we have underestimated both the costs of the project (by not monetising donations of materials), and also the costs of homelessness (by not monetising lost productivity, economic spill-overs, and declines in personal wellbeing caused by homelessness). It is not possible to gauge the extent of either underestimate. However, on balance we believe that we have underestimated the costs of homelessness by more than the cost of the programme, due to the wide range of indirect economic effects which are not included in the estimates used of costs of homelessness. As such, 24 households should be taken as an upper bound figure for the number which FF must prevent becoming homeless in order to break even.

Interpreting the Break Even Condition

To determine whether the FF project is likely to reach this break-even condition, we must be clear on how it should be interpreted. The main benefit of FF is the prevention of homelessness. In monetary terms, this is calculated as:

(Number of families prevented from becoming homeless)
x (Average costs of a case of homelessness)

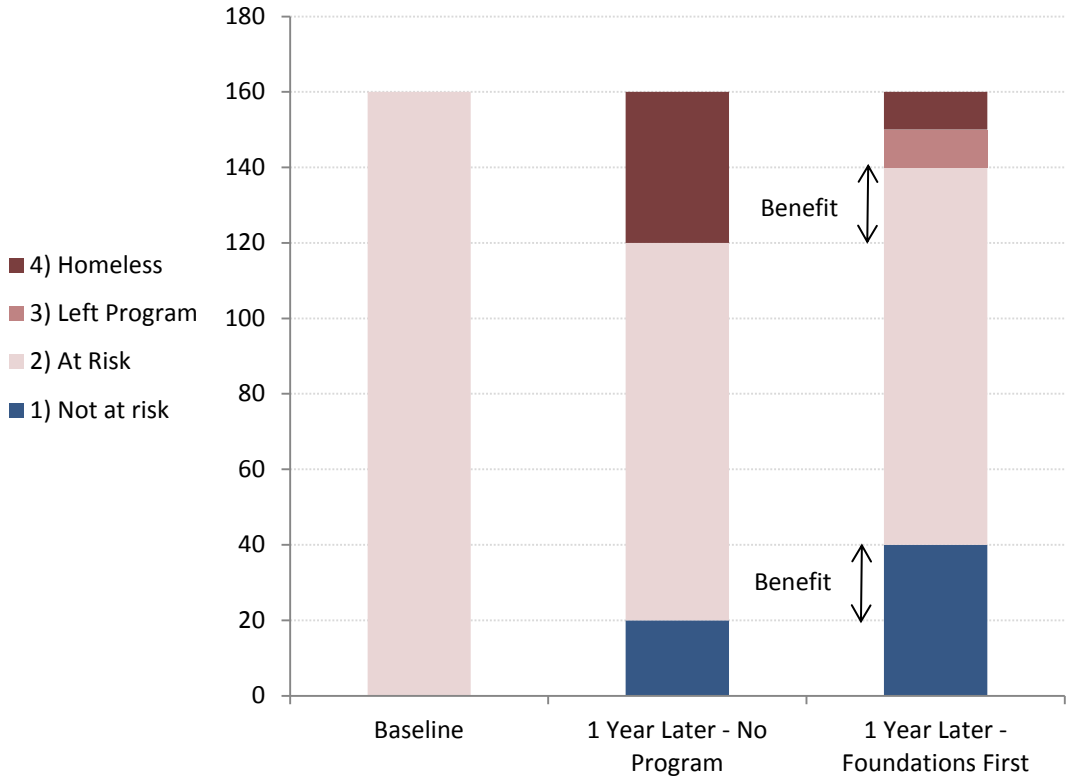
A worked example explains how this calculation is made. Imagine there are 160 households at risk of becoming homeless. Now imagine that support from FF is not available. After one year, there are three possible outcomes for these households: 1) no longer at risk, 2) still at risk but in accommodation, and 3) homeless. The graph below shows some hypothetical numbers, with 20 households no longer at risk, 40 households homeless, and 100 still at risk.

Now, imagine that support from FF had been available to all 160 households over the course of this year. At the end of the year, there are now four possible outcomes for these households: 1) The household is no longer at risk, and the case is closed, 2) The household remains at risk and remains enrolled on the programme, 3) The household has decided to leave the programme while still at risk, and 4) The household is homeless. The graph below again shows some hypothetical numbers: 40 households are no longer at risk, 100 remain at risk but enrolled on FF, 10 have left the programme, and 10 have become homeless.

If the outcome is 1) no longer at risk, or 2) still at risk but enrolled on FF, there has been some benefit from the programme: FF has prevented at least some of these

households from becoming homeless. If the outcome is 3) no longer on programme but still at risk, or 4) homeless, FF has not prevented any cases of homelessness, so there is no benefit.

Figure 1 – Worked Example of Potential Benefits of Foundations First (Units are number of households)



However, to calculate the benefit of FF, the question is not how many households have not become homeless. Rather, it is how many *additional* households FF has prevented from becoming homeless as compared to the situation in which we do nothing. Some households will become no longer at risk even without FF. Some households will become homeless with or without FF. The table below shows how we would calculate the number of cases of homelessness avoided by FF if we had all the required data:

- At the end of the year, 10 households are homeless if FF is running, while 40 are homeless if we do nothing. This means FF has prevented 40-10=30 cases of homelessness.
- At the end of the year, 40 households are not at risk, as compared to 20 if we do nothing. This means FF has caused 40-20 households to stop being at risk. However, not all of these households would have become homeless. As 40/160=25% of at risk households become homeless if we do nothing, our best estimate is that 25% of these 20 households would have become homeless if

we had done nothing i.e. 5 households. So FF has prevented a further 5 households from becoming homeless.

- In total, this means FF has caused 30+5=35 cases of homelessness to be avoided.

Table 3 – Worked Example of Break Even Condition

	Baseline	1 Year Later - No Programme	1 Year Later - Foundations First	Number of cases of homelessness avoided
1) Not at risk	0	20	40	5
2) At Risk	160	100	100	0
3) Left Programme	0	0	10	0
4) Homeless	0	40	10	30
Number of cases of homelessness avoided by Foundations First				35

5. Is Foundations First likely to meet the break-even condition?

We have not located any experimental or quasi-experimental studies on the effectiveness of anti-homelessness interventions similar to Foundations First. Therefore any analysis of whether FF is likely to meet the break-even condition will necessarily involve some rudimentary calculations. We have conducted a rough estimate of how effective FF is compared to the counterfactual scenario of no FF. We have done this by comparing data from the first year of FF operating with the outcome of homelessness prevention approaches across Scotland. We used the Scottish Government Housing Options statistics to do this[4].

The Housing Options approach is where households who contact the local authority with any housing related issue are given advice, information, or referred to an appropriate organisation, such as a charity. The aim is to prevent homelessness in at-risk households. This preventative approach was viewed as a wide success in England and Wales, and began to be adopted across Scotland in 2010. The Scottish Government collects returns from every local authority on the outcome of these prevention attempts and publishes them as Official Statistics. We are using the latest available data from 1st April 2016 to 30th September 2016[5].

[4] See http://www.gov.scot/Topics/Statistics/Browse/Housing-Regeneration/RefTables#Publications.
[5] Available here: http://www.gov.scot/Topics/Statistics/Browse/Housing-Regeneration/RefTables/PREVENT1Sept2016

The data for the whole of Scotland shows that 61% of households approached by local authorities under the Housing Options scheme either made a homelessness application or contact was lost. The remaining 39% either remained in their accommodation or found new accommodation.

FF gave us some preliminary outcome data from its first year of operation. The main outcome FF track is whether a household still has a sustained tenancy 6 months after initial contact with them. We use data for the period between May 2015 and November 2015. 105 households were approached by FF. 30 did not wish to engage with FF and 75 did. Of those 75, 41 had a sustained tenancy of 6 months and 34 either did not, or FF lost contact with them.

We compare this initial FF data with the outcomes of prevention approaches across Scotland, using the Housing Options data. A caveat with this analysis is that we are not comparing like for like outcomes. FF does not always have data on whether households who engaged with them went on to make a homelessness application. Therefore we only have a single category for making an application or losing contact. In reality, we would expect some of those who do not keep in contact to not make an application. Furthermore, a sustained tenancy for 6 months is a much more stringent outcome to test against than just whether accommodation is found. So comparing with the Housing Options dataset is likely to understate FF's effectiveness. On the other hand, households are not tracked after 6 months, and may present as homeless after this period. Finally, FF initial data may not be representative of what the programme achieves throughout its life.

The direct comparison is in table 4 below. In both cases the figures are for households.

Table 4 – Comparing Outcomes of Homelessness Prevention Approaches

Outcome	Scotland[6]	Foundations First
Made homeless application or lost contact	61%	45%
No homeless application	39%	55%

Given the caveats above, the table suggests FF users may be 16 percentage points less likely to be homeless. If we take this assumption that FF is 16 percentage points more effective than the counterfactual, given FF engaged 75 households, they may have already prevented 12 households from becoming homeless. With these estimates, they would therefore need to engage another 75 households to meet the

[6] Taken from table 9: http://www.gov.scot/Resource/0051/00512929.xlsx . If outcome is "Lost Contact/ Not known" or "Made homelessness application to local authority", then these are classed as "Made homelessness application or lost contact". All other outcomes are classed as "No homelessness application".

break-even condition. The data they have given, up to July 2016, shows they were close to engaging this many additional households already.

Given the data we have, we consider it likely that FF will meet the break-even condition, and indeed may have already done so in 2016, the second year of operation.

6. Conclusion

An economic analysis suggests that the Foundations First project will need to prevent at most 24 cases of homelessness lasting 12 months in order for its societal benefits to outweigh its running costs. An analysis of the effectiveness of Foundations First in their first year, compared with preventative efforts in Scottish local authorities, suggests that FF is likely to meet this target.

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