Effectiveness of Time to Shine

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PRO BONO ECONOMICS

Pro Bono Economics uses economics to empower the social sector and to increase wellbeing across the UK. We combine project work for individual charities and social enterprises with policy research that can drive systemic change. Working with 400 volunteer economists, we have supported over 500 charities since our inception in 2009.

The Rank Foundation is a charitable organisation that works closely with other charities to help them improve the lives of people and their communities across the UK by developing leadership, encouraging innovation, caring for the disadvantaged and marginalised, and promoting the values and traditions of Christianity from the perspective of respecting those of all faiths and none.

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Executive summary

The skills of those working in the charity sector are critical to ensuring that charities help the most vulnerable in our society in an efficient and effective way. The Rank Foundation believes that filling capacity needs in small charities allows them to focus on strategic improvements that can enhance their impact. Through its Time to Shine programme, the Rank Foundation funds 12-month employee placements in charities to meet a specific organisational need.

This report provides an analysis of the potential impact of Time to Shine on the charities that take part in the programme. Using statistical modelling to identify an artificial control group of comparable charities, we analysed differences in charity incomes after participation in Time to Shine. If the programme is effective, we would expect the charities that participate in it to have a larger increase in income after participation than similar charities that have not participated in the programme.

The study found that:

- Charity leaders can be 75% confident that participation in Time to Shine will have a positive effect on their charity's income in the three years after participation in the programme.
- Charities which participate in Time to Shine are estimated to have, on average, 5% higher incomes after the programme compared to similar charities which do not participate – this is equivalent to an average increase of around £200,000 per year. However, due to small sample sizes, there is a high degree of uncertainty and this estimate does not pass standard statistical tests.
- As the cost of funding the average Time to Shine charity in 2019/20 was approximately £22,000, the programme's benefits would outweigh the costs if it increases a charity's annual income by just 0.5%.

Our analysis provides tentative initial evidence that the Rank Foundation's Time to Shine programme is having a positive impact on the income of the charities it supports. However, it is also likely that the programme provides a range of other benefits to charities, including improvements to the efficiency and effectiveness of charity delivery.

The Rank Foundation created Time to Shine out of necessity because of the effect of the 2008 recession on charities. Financial pressures on charities caused by the economic downturn put a squeeze on resources required to invest and build capacity, while demands on the sector increased. With the pandemic having a similar effect, Time to Shine continues to play a notable role in enabling the charities it works with to not only deal with an increase in service users but to improve and develop their workforce's skills. This means they should be better placed to step in when people need them the most. As the programme works with more charities and more data becomes available, future studies could provide stronger evidence of the positive impacts provided by the programme.

Introduction

Often, charities face a challenging task: work with limited resources to deliver services to the most vulnerable in society. With 80% of organisations having incomes less than £100,000 per year,[1] most of the sector is working on very tight budgets. Hiring a full-time employee at the Living Wage would cost more than 18% of these charities' annual income.[2] This means that expanding their teams is extremely costly and out of reach for most small charities.

The inability to grow a team can impact the workforce skills and services of a charity. Recent surveys by Pro Bono Economics indicate that the pandemic has exacerbated the demands on charities and reductions in their funding.[3] This can impact their ability to dedicate time to develop new skills and/or services. Trustees of smaller charities also feel that their boards do not have the required skills.[4] Working with small budgets and teams restricts the resources that people can invest in their skills. The most constrained charities simply do not have the time to attend development courses.[5] To enable small charities to be as effective as possible, quite simply, additional resources are needed.

The Rank Foundation runs the Time to Shine programme to help develop and improve leadership skills in the charity sector. The programme has been in operation for 11 years and provides charities with funding to support a full-time employee to work on a specific developmental/organisational need for one year. They have helped over 200 charities through this programme. Eligible charities can apply for funding for specific projects to achieve specified needs using an employee

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[1] Martin, A. et al., *UK Civil Society Almanac 2021*, NCVO, 2021 https://beta.ncvo.org.uk/ncvo-publications/uk-civil-society-almanac-2021/executive-summary/

[2] Annual living wage calculated as working 40 hours per week for 52 weeks a year.

[3] Larkham, J. *Hysteresis in the making? Pandemic scars and the charity sector*, Pro Bono Economics, November 2021. https://civilsocietycommission.org/wp-content/uploads/2021/11/Hysteresis-in-the-making.pdf

[4] *Taken on trust: The awareness and effectiveness of charity trustees in England and Wales.* Charity Commission, November 2017. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/658766/20171113_Taken_on_Trust_awareness_and_effectiveness_of_charity_trustees.pdf

[5] *Taken on trust: The awareness and effectiveness of charity trustees in England and Wales.* Charity Commission, November 2017.

they have identified.[6] The support enables small charities to build their leadership, organisation and fundraising capabilities.

In particular, the Rank Foundation cares about their partner charities' sustainability and fundraising capabilities as these factors are likely to have the most long-term and sizeable impact on the effectiveness of the partner charities. For this reason, the Rank Foundation is interested in assessing the effectiveness of its Time to Shine programme in achieving these longer-term outcomes

Case Study

Memory Matters is an organisation based in the South West which supports people diagnosed with dementia. We were in need of a marketing expert and learned that Time to Shine could help us to fund this position. We wrote a job advertisement for a Marketing Officer to find our Time to Shine Leader.

During the programme, our Leader helped to define our brand and reach more people than ever before. Specifically, the leader redesigned our website, increased foot traffic at our café, designed training materials, developed marketing plans, etc. This work created huge change within our organisation, it enabled us to create a blueprint to our marketing that we did not have previously. Furthermore, the post enabled us to be clear on our brand and define our brand succinctly.

After the initial 12-month programme, our Time to Shine leader stayed on as an employee of Memory Matters for another 18 months. Before they left, our Time to Shine Leader consolidated the work they had done and produced a marketing manual for our new provider to use as a starting point which facilitated a smooth transition to a marketing company to take us forward with a team of people.

Memory Matters (CEO – Kate Smith)

[6] Eligibility criteria are that the charity should have an annual income of between £100,000 and £750,000; and be within the Rank Network or be an eligible National Lottery grant holder in certain regions of the United Kingdom.

Scope of this study

In this report, we provide an estimate of the impact of participation in the Time to Shine programme on a charity's annual income. We use a "difference-in-differences" approach which enables us to measure how income for charities that participated in Time to Shine differed from similar non-participating charities after the conclusion of the programme.

We recognise that measuring changes in income is an imperfect measure of the success of the Time to Shine programme. Although higher annual income is associated with a charity having better fundraising capability and potentially increased sustainability, it does not necessarily capture any impacts on the efficiency or effectiveness of services delivered. However, in the absence of publicly available data on charity outputs or outcomes, the assessment of impacts on charities' income through Charity Commission data is the only viable path to quantifying the programme's impact at present.

Our approach

To estimate the impact of Time to Shine on a charity we analyse whether participating charities' income increases at a greater rate after participation than other comparable non-participating charities. We use statistical modelling to identify an artificial control group of comparable charities, drawing on data from the Charities Commission. If the programme is effective, we would expect the charities that participated in the programme to have a larger increase in income after participation, compared to similar non-participating charities.

Benefits of Time to Shine on charity income

To estimate the change in income associated with participation in the Time to Shine programme we take a three-step approach.

Step 1 - Use Charity Commission data to find the incomes and characteristics of Time to Shine charities: The Rank Foundation provided us with a list of charities that applied for the Time to Shine programme, their date of application, and whether the applicant charity ended up participating in the programme. For each Time to Shine charity, the Charity Commission data provides us with the annual incomes, year of creation and whether the charity operates internationally. We restrict the sample to Time to Shine charities that have at least three years of data prior to and after participating in Time to Shine. This provides a dataset of 42 charities that participated in the Time to Shine programme since 2010. A more detailed description of the construction of the dataset is set out in Annex A.

Step 2 - Build a control group of charities with similar characteristics to the Time to Shine charities: To understand if Time to Shine charities' income increased after participation in the programme, we need to attempt to understand what would have happened had they not participated. To do this we create a control group of charities that are analytically matched to have similar characteristics to the Time to Shine charities.

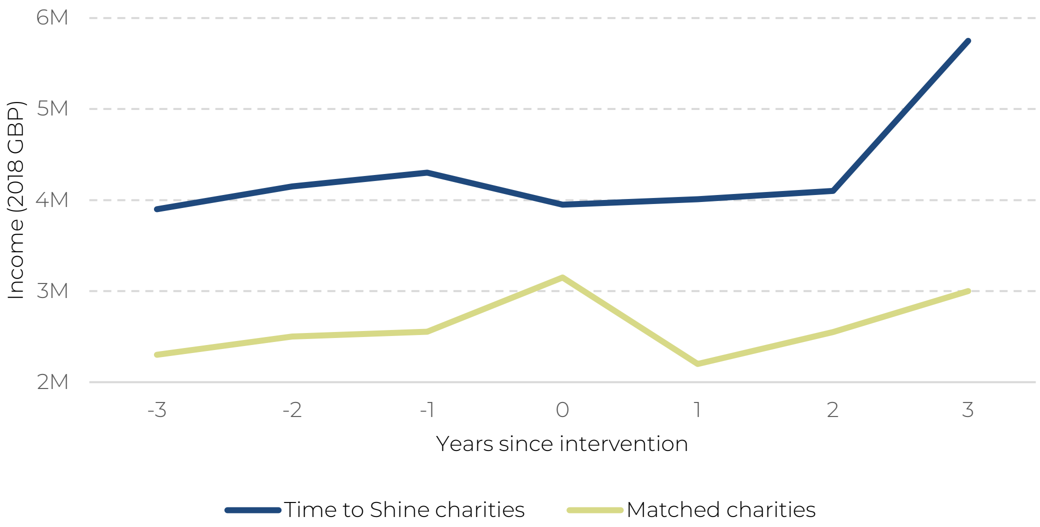
As the Charity Commission has data on all registered charities in England and Wales, this provides the opportunity to find charities with similar characteristics as the Time to Shine charities. For each Time to Shine charity, we find up to five registered charities that have similar incomes (in the three years preceding their participation in Time to Shine), similar areas of operation (international or domestic) and a similar number of years in operation. This means that the difference in income trends between the Time to Shine and matched charities prior to the intervention year should be small.[7] More information on how we match charities can be found in Annex A.

Figure 1 below shows the average income of Time to Shine charities (**Step 1**) and the matched charities (**Step 2**) prior to and after participation in the programme. This graph shows that the trend in incomes before intervention is similar between the treatment and control groups, except for the year immediately prior to the intervention when the control group's average income increases whereas the treatment group's average income decreases.[8]

[7] There could still be differences between the accepted Rank charities and the matched Charity Commission charities as the Rank charities may have higher motivation (as indicated by them applying to Rank). Therefore, an estimated positive effect of the Time to Shine programme on a participating charity's income could be partially due to that charity being more motivated in the first place.

[8] The average income for the control group (matched charities) in the years preceding intervention is approximately £2.5 million. For this statistical method, the incomes do not have to be identical between the Rank charities and the matched charities; however, the trends of their income must be similar. This is because the method can account for differences in levels of income before intervention.

Figure 1. Mean income for Time to Shine vs matched charities



Step 3 - Run statistical model to estimate the impact of Time to Shine on participating charities' income: Now that we have the treated Time to Shine group (**Step 1**) and have an analytically matched control group (**Step 2**), we run regression analysis to see whether participating in the Time to Shine programme can explain changes in a charity's income after participation in the programme.[9] As the income trends are similar for the two groups prior to participation in Time to Shine, differences in income between the two groups after some of the charities participate can be argued to be partially attributed to the programme. More information on the statistical method is provided in Annex B.

Key assumptions of the study

Our analysis is based on several assumptions, the most important of which are:

- We assume that matching charities accepted to the Time to Shine programme to Charity Commission charities with similar income and characteristics accounts for differences between the two groups. However, there may be unobservable differences between the two groups of charities. For example, an applicant to the Time to Shine programme is likely to be focused on trying to improve its fundraising capabilities already and might already be in the process of trying to do

[9] More information on the regression model and variables used is provided in Annex B.

so via additional means. Conversely, a charity that did not even apply to the Time to Shine programme might not be overly concerned about improving its fundraising and, for that reason, is unlikely to be attempting other methods of trying to do so.[10] Therefore, we assume that differences in income between the groups after participation in the programme can be partially attributed to Time to Shine's impact.

- The analysis focuses on the difference in income between participating and non-participating similar charities as a means of quantifying the impact of Time to Shine. Time to Shine may not lead to a quick increase in income for the charity but may enable the charity to begin longer term investments in changing services, improving leadership skills etc. This means that some of the benefits in terms of increased income won't be experienced until more than three years after the intervention. As a result, they won't be picked up by our study.

[10] We explored an alternative example where we compared accepted and rejected Time to Shine charities to account for this potential difference in motivation. However, due to small sample sizes in the rejected group creating volatility in the estimates, it was not robust enough to be included in the analysis.

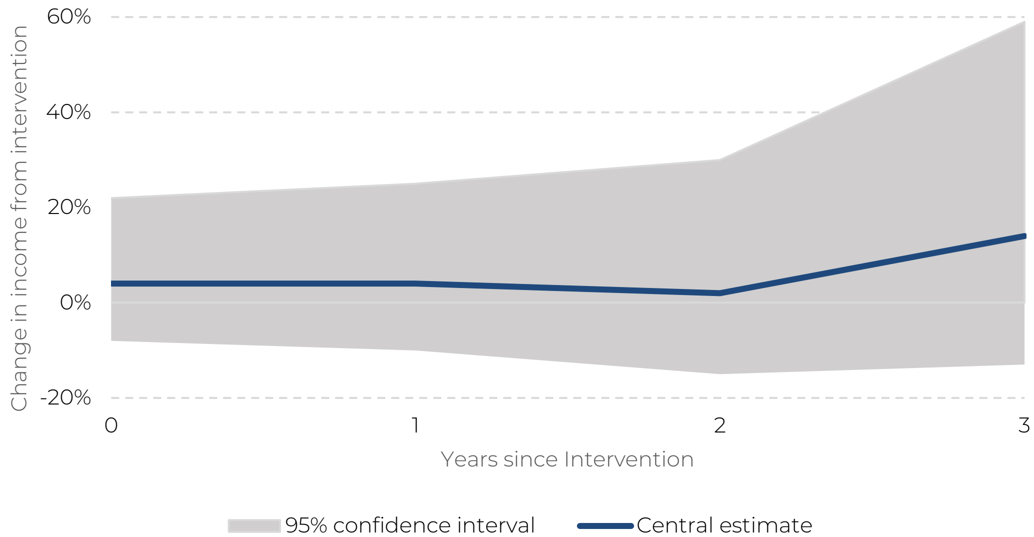
Results of our analysis

Comparing the incomes of Time to Shine charities and matched charities after participation in the programme indicates a potentially positive effect on a charity's income from participating in the programme.

Our best estimate suggests that participation in the Time to Shine programme is associated with a 5% increase in a charity's income, on average, in the three years after participation. However, given the general volatility in the data, there is a high degree of uncertainty around this best estimate and we cannot be sufficiently confident that this effect is meaningfully different from having no impact at all. In technical terms, we would say that the effect is not statistically significant.[11]

The blue line in Figure 2 (below) shows the estimated percentage difference in incomes between Time to Shine and matched charities in the three years after the treated group participates in the programme. The grey area shows the uncertainty that surrounds the estimate.[12] While the estimated effect of Time to Shine on a charity's income is consistently above zero, the uncertainty of the estimate, including zero effect, means that the estimated effect is not statistically significant.

Figure 2. Comparison of Time to Shine charities' income to matched charities income



[11] The relatively small sample of charities makes it more difficult to find estimates that are statistically different from zero.

[12] This is the 95% confidence interval surround the estimated effect of the Time to Shine programme on participating charities compared to non-participating matched charities.

The best we can say is that, based on our analysis, we can be 75% confident that Time to Shine is having a positive impact on charities' incomes.[13] Full results are shown in Figure 3 in the Annex B.[14]

However, as an illustrative scenario, if we assume that our best estimates for Time to Shine's impact are correct then participation in the Time to Shine programme could be associated with an increase in annual income for the average participating charity of up to £200,000.[15] We cannot attribute all of that increase in income to participation in Time to Shine as the charities may have also been trying to increase their incomes in other ways. However, if just 10% of the increase is due to Time to Shine, this is more than the cost of employing a worker at the annual Living Wage.

[13] This is calculated by taking the p-value of the interacted coefficients (which showing the differential impact of the changes in income after participation in Time to Shine compared to the matched charities) and dividing it by 2 to get the p-value for the coefficient being greater than 0. This results in a p-value of 0.26 which means we are approximately 75% confident that coefficient is greater than zero.
[14] The matching method we use to create this control group is "Mahalanobis" matching, which chooses the charity (or charities) to match with an individual charity in the treatment group in order to minimize the "distance" between the values for a set of variables (in our case, the annual incomes in each of the three years prior to the intervention) for the treatment group charity compared to the matched charity / charities. Note that the number of charities in the control group is likely to be less than x times the number of charities in the treatment group due to some treatment charities matching with the same control group charity and some matched control group charities having incomplete data after the identified intervention year.
[15] The mean annual income of this control group is roughly £4 million for Time to Shine charities in the years immediately prior to their participation in the programme.

Conclusion

Improving leadership skills in the charity sector would enable charities to improve services and effectiveness. However, additional resources are required to enable charities to develop their skills. The Time to Shine programme provides vital funds to individual charities to support paying a nominated individual at each charity the Living Wage for a year so that they can undertake a specific project with the aim of increasing that organisation's operational and leadership capabilities.

We have examined the extent to which participation in the Time to Shine programme has improved a charity's fundraising capabilities, using their annual incomes as a measure. We have compared the annual incomes of Time to Shine's partner charities against a control group that uses a matched set of charities based on annual incomes prior to the intervention to account for pre-intervention trends.

Having conducted this analysis, we are 75% confident that participation in Time to Shine is associated with a positive impact on a charity's annual income. Repeating this exercise in a few years' time, when more data is available, could find a stronger effect of participation in the Time to Shine programme.

Annex A: Data Construction

In order to construct the dataset we use for our analysis, we combine data from multiple sources. We use data from the Charity Commission regarding charities' annual incomes (and expenditures); NCVO data on the sort of services a charity provides; and data provided by the Rank Foundation regarding the applicants and participants in the Time to Shine programme.

The Charity Commission data provides basic financial information (income and expenditure) for every charity registered in England and Wales for each year over the period from 2004 to 2019. It does not cover any charity registered in either Scotland or Northern Ireland. For certain charities (those that report an annual income over £500,000) the data also contains more detailed information (such as categorisations of income by source e.g. legacies, donations, government grants etc.). However, as this more detailed information is not available for smaller charities, we focus only on the total annual income for a charity in each year. We convert all income figures into constant 2018 GBP using the ONS' CPI index.

This data also includes some limited information as to a charity's local area (this can be a specific county, the entire UK, or various other countries), and the services a charity provides. However, this information is recorded in a difficult-to-use manner so we only use it to control for whether a charity is "local" or "global".

To obtain higher quality information on the type of services a charity provides, we matched the Charity Commission data to data from the NCVO that classifies a charity into a particular category (such as "housing", "law and legal services", "social services", "culture and arts", and many others) using the charity's registration number.

We also match in data received from the Rank Foundation using a charity's registration number. This data contains a list of charities that applied to the Time to Shine programme, the date they applied (which could be on multiple occasions), whether they were accepted or not, the date of their application, the date of their start on the programme if they did participate, as well as additional variables. In a small number of instances, information regarding a charity's registration number was missing (if, for example, the applicant charity was registered outside of England and Wales) and occasionally the date of application was missing – we are unable to match these observations to the Charity Commission dataset.

Our final dataset thus consists of all charities in England and Wales that reported incomes to the Charity Commission and that we could match with data received from NCVO, and with whether they applied for and/or participated in the Time to Shine programme indicated by the data provided by the Rank Foundation.

Annex B: Methodology

Regression model

To analyse whether participation in Time to Shine is associated with an increase in income, we use an econometric method called 'Difference-in-Differences'.

$$Income_{ct} = \alpha + \beta Period_t + \gamma Rank_c + \delta(Period_t * Rank_c) + \tau Year + \boldsymbol{X'_c \beta_k} + \varepsilon_{ct}$$

Where:

$Income_{ct}$ – Log income of charity *c* at year *t*

α – Intercept

$\beta, \gamma, \tau, \boldsymbol{\beta_k}$ - Coefficients

$Period_t$- =1 if post intervention year and =0 if pre intervention year

$Rank_c$ - =1 if a Time to Shine charity and =0 if a matched Charity Commission charity

δ – Coefficient of interaction term which shows the differential effect on income for Time to Shine charities after intervention compared to matched charities

$Year$ – Year of income

$\boldsymbol{X_c}$ –Vector of other control variables such as sector, age of charity, whether they operate internationally

ε_{ct} – Error term

The coefficient of importance is the interaction term, $\boldsymbol{\delta}$, which provides the estimate of the differential effect of participation in the Time to Shine programme on income compared to those who did not participate. Given that the outcome being measured can change over time regardless of participation in a programme, the first "difference" is calculated as the change in the outcome for each of the treatment and control group. For the treatment group this is taken as the difference in the outcome before and after participation in the programme, while for the control group this is taken as the difference in the outcome between some two appropriate time periods. This first differencing should remove any factors that might have changed over time and affected the outcome but that were unrelated to participation in the programme.

Further results

Figure 3 below shows the main results of the statistical model explained above. This shows the average estimated effect of Time to Shine after participation in the programme.

Figure 3. Main results of regression analysis

	Up to five matched charities per Time to Shine charity
Estimated % increase in annual income after participation in Time to Shine (δ from equation above)	5.4%
95% Confidence interval	-11% - 25%
Number of observations	1,589
Charities in Treatment Group	42
Charities in Control Group	175
Adjusted R^2	0.25
Control variables included	Charity age, operating overseas, NCVO type, year

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