







THE HOUSE OF GOOD

The economic and social value of church buildings to the UK

Key Findings and Technical Report



For people who love church buildings

ABOUT THE NATIONAL CHURCHES TRUST

The National Churches Trust is the charity for people who love church buildings. Our work is dedicated to supporting churches, chapels and meeting houses open for regular worship and of historic, architectural and community value throughout the UK.

We do this by providing grants for urgent repairs and community facilities, helping places of worship keep their buildings in good condition and making it easy for everyone to discover the wonder of the UK's sacred heritage.

In the last ten years we have awarded over 1,500 grants totalling \pm 14 million. We are experts in what we do, and churches know to turn to us for support. Find out more at **nationalchurchestrust.org**

ABOUT STATE OF LIFE

State of Life, who carried out The House of Good study, use open data, economic analysis and digital technology to evidence social impact and value. This helps organisations demonstrate the difference they make to their funders, partners, volunteers, staff and members and wider society. **stateoflife.org**

CONTENTS

KEY FINDINGS	6
Introduction	6
Methodology	8
Summary of Findings	12
Market Value and Cost Replacement - £2.4 billion	13
Non-market / Social Value and Wellbeing - £10 billion	17
Summary Value Tables and Discussion	21
COVID-19	22
Conclusions	23
Caveats	24
TECHNICAL REPORT	25
1. Direct Economic Value	25
2. Community and Social Good - Cost Replacement	29
3. Wage Replacement Value of Volunteering	39
4. Non-market Value: The Wellbeing Value of Volunteering	41
5. Non-market Value of Social Good	44
6. Wellbeing Value of Church Attendance	49
Summary of Values and Conclusion	54
Appendix 1. Literature Review	57
Appendix 2. Details of Regression Models	60
Appendix 3. Full Statistics	66
References	66

THE HOUSE OF GOOD

Church buildings are so much more than places of worship.

From food banks to credit unions, church buildings across the UK provide a growing list of essential services for people in urgent need.

We've long seen the power of churches, chapels and meeting houses to bring communities together and help them thrive. But we've never been able to measure it.

After all, how do you put a price on feeling confident about where your family's next meal is coming from, or knowing someone cares about you?

In 2019, we commissioned social impact and value specialists State of Life to conduct a pioneering study to find out. For the very first time, we can now quantify the economic and social value of all church buildings to the UK. Not the bricks and mortar but the welfare and wellbeing they create in our communities.

We believe that these findings are remarkable. They show that the UK's church buildings are not just Houses of God. They are also Houses of Good – good that we risk losing, and may never be able to replace if they do not get the financial support they need.

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Claire Walker, CEO, National Churches Trust

October 2020

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Luke March, Chairman, National Churches Trust

The House of Good report created by State of Life

Iulian Gramatki Ricky Lawton Lizzie Trotter Howard Reed Will Watt

WELCOMING THE HOUSE OF GOOD

"There are church buildings throughout the United Kingdom. They take many shapes and forms, but there is still likely to be one fairly close to everyone in England, Wales, Scotland or Northern Ireland. Prayer and worship are at the heart of their purpose, whether it takes place daily, weekly or less often, but the Christian faith also challenges us to put our prayers into action. This new and timely report shows how much our church buildings can contribute to the good of the communities they serve."

"The House of Good report uses a new approach, attempting to quantify the financial value of the benefits provided by church-based activity. It shows that these benefits run to billions of pounds – and that's before we consider the benefits to mental and physical health and to the volunteers who provide the services. It makes an argument for why it is appropriate for them to be funded by national government and why they merit a special place when funding for heritage and public good is considered."

"This report also celebrates the scope of faith-inspired work, from newer activities like credit unions to the longer established food banks and addiction support. More than 33,000 social action projects are supported by churches throughout the UK. They often serve in the most deprived areas, compelled to act by their faith in Jesus Christ. The work they do might be quantified in this report, but the truth is that this work goes far beyond financial value. Each life that is made better as a result of support through the Church's social action projects is a living demonstration of Christ's work in our societies and His call for us to love our neighbour."

"When public worship and private prayer in church buildings became impossible during the lockdown in 2020, there was a sense of loss for some. And yet churches around the country continued to use their buildings for the benefit of society as soon as they were able, running food banks as people suffered the fallout of the pandemic. Our church buildings mark important moments – they are the places where we are married, baptised, perhaps the final resting place of those we love. These memories and events are at the heart of our relationships and experiences, reminders of the centrality and presence of God in our lives."

"The value that church buildings provide in offering a space where all are welcomed and loved might be priceless, but looking after a public building has very large costs. Churches are no exception. Many church buildings are part of our nation's heritage – nationally and internationally significant buildings. The benefits of these special and historic buildings to our society are maintained by church members volunteering their time and expertise – ordinary people around the country motivated by their faith and love of Jesus Christ. We are grateful for those who devote their time to loving their neighbour and caring for their communities. Generous funding for the places where they volunteer will enable continued good to our society long into the future."

Most Revd Justin Welby, Archbishop of Canterbury Most Revd Stephen Cottrell, Archbishop of York *Joint Presidents, National Churches Trust*

"Food Banks, Night Shelters, Luncheon Clubs, Food Delivery, Community Centres, Advice and Counselling Sessions and so much else take place on church premises and in church halls. All of these in the curtilage of historic buildings which are beloved by local communities whose fabric and ministry is supported by often heroic communities. The late Cardinal Basil Hume once wrote that churches are not just places in which we worship God but with which we worship God. The House of Good report will both stimulate and encourage all who are committed to these places of worship to cooperate even more with statutory and voluntary agencies in order to ensure that the witness and service they provide may be maintained and enhanced in the years to come."

+George Stack, Archbishop of Cardiff

Vice President of National Churches Trust

Chair – Patrimony Committee of the Bishops Conference of England and Wales

"As a funder supporting many charities that rely on church buildings to do their work, we have an intuitive sense of the importance of these community assets. Thank you National Churches Trust for this timely report, which helps to fill in the gaps in our collective understanding of the broader social value of churches."

Anna de Pulford, Director, The Dulverton Trust

"For the worshipping community, the primary purpose of churches is as a house of prayer - a 'House of God'. But is clear that for the wider community these are buildings that are loved and cherished. That is partly for their intrinsic cultural and heritage importance (an area that Wolfson has long funded). This timely and welcome report demonstrates that another dimension to church buildings - their social value - has perhaps been somewhat overlooked and undervalued. The value of churches as 'Houses of Good' (to quote the report's elegant phrase) has been highlighted as never before during the challenges of the Covid-19 pandemic, when many churches have stood as beacons of hope. The attempt to put a financial worth on this social benefit is striking - both because of the sheer scale of the equivalent monetary value, and the fact that this social benefit reaches virtually every community in the UK."

Paul Ramsbottom, Chief Executive, The Wolfson Foundation

"We know from our philanthropic work that church buildings are vital to communities across the country, providing space for much needed social, as well as spiritual, support. We welcome this report from the National Churches Trust which provides solid evidence for this and we commend it and the work of the National Churches Trust in enabling churches to better serve their communities"

Tom Sheldon, Chair, The Mercers' Company Church & Communities Committee

"The authors make a good case that the community still gets value for money from the various church activities taking place in the churches of England, particularly via their outreach activities to the homeless and others at the bottom of society."

Professor Paul Frijters, Visiting Professor at the Department of Social Policy at the London School of Economics

"We were asked to review the methodology and presentation of findings in the report. Overall we found the report well-structured and clearly communicated, particularly given the complexity of the set of activities being valued. We also support the use of subjective wellbeing measures to capture the full impact that these activities can have on people's lives."

"We feel it is important to highlight that this paper places a monetary value on the activity occurring in churches rather than evaluating what would happen if they didn't exist – this distinction is important in the interpretation of results but appears sensible as the latter approach would be extremely challenging given the longstanding and well-integrated position of churches in communities and their role in offering a final safety net when nobody else is able to step-in."

"We have highlighted a number of limitations with the robustness of data, particularly at the outer edges of the methodology, as well as the challenges in applying a monetary value to wellbeing improvements but feel that these have been appropriately highlighted and caveated in the final report."

Jon Franklin, Chief Economist at Pro Bono Economics

KEY FINDINGS

INTRODUCTION

Churches are 'key places'

"The vulnerable people in our community really appreciate the help we give. A lot of the people do not go to church to worship, but they turn to the church because they are in need." Annette Saunders, Volunteer at Sacred Heart Church, Tamworth

To some, a church is primarily a House of God, a building where people meet to celebrate their faith. But to many, a church is also a House of Good, a building where people put their faith into practice by helping those in need.

There are countless examples of churches responding to the needs of local people – both throughout history and right up to the present day. Churches set up some of the first hospitals and schools, alongside numerous charities.

Today, church buildings continue to be places that help local people in need. They are home to drug and alcohol support, financial advice, youth clubs, after school care, credit unions. There are more food banks than McDonald's in the UK¹ and very many were set up by, are linked to, or are run by a church and its volunteers. In effect, church buildings are the UK's National Help Service.

Covid-19 makes the need for the social value provided by churches even more important. Despite church buildings being closed during the lockdown, 89% of churches rapidly re-purposed their efforts to help the community through the pandemic². This is a clear demonstration that church buildings are a ready made network of responsive hubs that look after the care and wellbeing of the local community.

The aim of this report

This study, commissioned by the National Churches Trust and produced by State of Life, is a pioneering look at the value of church buildings. For the first time, it quantifies the financial value of a range of key social and economic services that are generated by and through church buildings by the provision of mental health services, food banks, drug and alcohol support and youth activities.

It shows that church buildings are very cost-effective in meeting the needs of the local community and generate significant social and economic value.

The total social value of church buildings

In the UK, the total social value of church buildings calculated so far is at least ± 12.4 billion (roughly equal to the total NHS spending on mental health in 2018)³.

^{1.} https://fullfact.org/electionlive/2019/dec/9/food-banks-more-mcdonalds/

^{2.} National Churches Trust - State of the Churches COVID-19 Report

^{3.} https://www.england.nhs.uk/publication/nhs-mental-health-dashboard/

- This figure could be as high as £62.8 billion (around half of all NHS spending in England⁴) if the impacts are valued in alternative monetary wellbeing terms.
- Urban and rural churches generate roughly the same amount of social value per person.
- However, urban churches generate more social value in total as they are able to host and serve more people. This is especially true in deprived urban areas where they are also at greatest risk of closure. See Table 12 on page 54 for more details.
- Cost-benefit analysis shows that for every £1 invested in church buildings there is a Social Return on Investment of £3.74 using the most conservative methods, which can go up to £18.10 when alternative wellbeing valuation methods are used. There is no question that church buildings provide a strong, positive return on every £1 invested.
- This report has, at almost every stage, used the most conservative estimates and has not included all areas of social and community care. It also does not include other areas of potential value for church buildings such as tourism, heritage and non-use value. We recommend that further research be undertaken to expand on the social value of churches.

The findings of this report are incredibly relevant and timely to the objectives of policies to 'level up'society and to reduce inequality. As we emerge from Covid-19 we need to identify 'key places' as we have already identified key workers – those places that will start to rebuild and look after the vulnerable and hardest hit in our society. One of those key places will be, and has always been, the local church building and its gathered community.

However, despite all this good, church buildings are at risk. If churches cannot remain open because they need repairs to the roof or they do not have basic facilities, they cannot provide these outstanding levels of support. We are fortunate in the UK to have over 40,000 churches of a very wide spread of denominations. Some are ancient historic buildings, others more modern purpose built or adapted from other uses.

According to a recent study by the Church Buildings Council⁵, "Churches in the most deprived parishes in the country are far more likely to struggle than those in less deprived areas and even more likely to close". These areas are also often those that are home to diverse socioeconomic and ethnic communities.

The funding to keep these buildings open and in good repair comes primarily from local and charitable endeavour, much of which is provided through the efforts of congregations themselves. Although through organisations such as the National Lottery Heritage Fund and directly through schemes such as the Listed Places of Worship Roof Repair Fund and the Listed Places of Worship Grant Scheme there has been support for church buildings, no long-term strategic local or national government funding is available.

For its part, in the last ten years the National Churches Trust has awarded over 1,500 grants totalling \pm 14 million to help keep church buildings open but demand far outweighs the ability of the Trust to provide grants, and the Trust has to say 'no' to 75% of the churches that need support. Perhaps the most disturbing result of a shortage of funding is that the social value that church buildings provide is often most at risk exactly where it is needed most. If churches cannot remain open because they need repairs then they cannot provide help.

A network of social value

It is sometimes argued that the time and money needed to look after church buildings could be better spent on helping those in need. However, this report shows that in many cases it is the very existence of church buildings that allows help to be provided.

Church buildings are a ready-made, efficient, responsive network of social value and Christian care. We cannot let these buildings crumble. Not only are churches our heritage, and our past, they are integral to our futures. Without significant help, we will lose these 'Houses of Good' and we will all be poorer as a result.

^{4.} https://www.kingsfund.org.uk/projects/nhs-in-a-nutshell/nhs-budget

^{5.} https://www.churchofengland.org/sites/default/files/2020-02/Struggling_closed_and_closing_churches_report.pdf

METHODOLOGY

Methodology for estimating the social value of church buildings

This section lists some general methodological considerations used throughout this study. More precise details on the monetary values derived in this report can be found in the respective sections of the Full Technical Report and in Appendices 2 and 3. Furthermore, the mathematical models, assumptions and calculations used to derive all valuation figures in this report can be viewed in full detail in spreadsheet form⁶.

WHAT IS A CHURCH?

In this report we define a church building as one that is open to the public and being used for Christian worship. There are around 40,300 church buildings in the UK according to research carried out for the National Churches Trust by The Brierley Consultancy.

For this study we focus on churches, chapels and meeting houses but exclude cathedrals. We also include activity that may take place within a church hall as an extension of the church building.

With the closure of many local public and commercial buildings, including libraries, community centres, post offices, local shops and pubs, churches remain one of the few community anchors in many villages and town centres.

The number of church buildings is substantially higher than other key public buildings in the UK. There are around 14,300 supermarkets operated by grocery retailers,11,500 post office branches, 7,500 bank branches and 3,600 public libraries⁷.

RAPID LITERATURE REVIEW AND GAP ANALYSIS

From a review of the literature and research in this area (attached as Appendix 1) we were able to conclude that research estimating the monetary valuation of the benefits of church buildings to society is still in its infancy. Studies tackling the subject are rather scarce and thus far have tended to focus on more traditional, economic spend (revenue, costs) and the heritage and/or tourism value, with some looking at volunteering.

In the report, we therefore attempt to fill in this gap with a comprehensive macro-level valuation study of church buildings in the UK, covering the key economic and social value components of the vital community activities and social care that church buildings provide and host.

^{6.} https://docs.google.com/spreadsheets/d/1XIG_QL-px6Ajg1HBaT0K1nYcp4S3IT3DNsnhchWUeUA

^{7.} https://www.nationalchurchestrust.org/news/holy-spirit-uk-has-more-churches-pubs

DATA USED AND DENOMINATIONAL COVERAGE

The main data sets used are:

- For church-level statistics we used the National Churches Trust Survey data from 2010 and a new survey this year.
 - The 2010 data provides a sample of over 7,000 churches
 - The 2020 data is a second wave of the survey, modified to be specifically relevant to this study, with a sample of 1,050 churches
- The National Churches Trust 2010 Survey was UK-wide, breaking down to 6,079 churches and chapels in England, 552 in Scotland, 463 in Wales and 139 in Northern Ireland. The smaller 2020 survey produced updated and complementary results from 824 churches and chapels in England, 33 in Scotland, 43 in Wales and 18 in Northern Ireland. (The remaining churches could not be geographically identified.)
- We have generally used the National Churches Trust 2020 Survey data, with the National Churches Trust 2010 Survey data providing supporting data for triangulation. In all cases, we have compared and referenced our primary data to supporting third party reports and data. The result is a consistent and robust picture of the economic and social value provided by church buildings.
- To analyse the relationship between church attendance, wellbeing and volunteering at an individual level, we used 77,510 responses from all areas of the UK from the Understanding Society survey 2009-10 and 2012-13.

The National Churches Trust 2020 and 2010 Survey data cover most of the Christian denominations in the UK, although proportional representation of each denomination (especially the smaller ones) cannot be guaranteed.

The number of Black Majority Churches in the data was small but they offer a wide range of support to their communities. In some areas, pastors receive training in how to support people with mental health problems, a particularly important concern, given that young black men between the ages of 13 and 24 have a much higher suicide rate than their white counterparts.

For certain inputs in our analysis we use third party data pertaining to the Church of England, but this is chiefly for alternative findings and robustness checks and not for the main figures. Therefore we can claim with reasonable confidence that the study takes into account the denominational diversity of Christian churches throughout the UK.

Where results have been estimated at the level of an individual church, we have aggregated to the national level using the figure of 40,300 churches in the UK⁸. There is also an alternative estimate in Table 12 which uses the England-wide proportion of Church of England rural, suburban and urban churches as weighting factors in an attempt to account for the proportion of these three types in the total population of churches (resulting in a slightly more conservative value).

^{8.} The figures on church buildings have been compiled for the National Churches Trust by the Brierley Consultancy, based on an analysis of the latest figures available from Christian denominations and included in the 2018 UK Church Statistics. https://www.nationalchurchestrust.org/news/holy-spirit-uk-has-more-churches-pubs

EVALUATION APPROACH

HM Treasury's (HMT) *The Green Book* is the central document in the UK government on how to evaluate the efficacy of a policy and its economic and social value. The latest (2018) *Green Book*⁹ guidance on policy evaluation places a specific emphasis on what is referred to as 'welfare economics', explicitly stating on page five that:

'Economic appraisal is based on the principles of welfare economics – that is, how the government can improve social welfare or wellbeing, referred to in The Green Book as social value.'

This study is subdivided into two key sections on market and non-market, or social, value (in line with *The Green Book*). This then breaks down into six key stages – or circles of value – for analysis.

Figure 1 on page 10 illustrates the broad logical framework of the value of church buildings – moving from church economic activity, defined in the narrowest sense, to wider and more allencompassing benefits to individuals and society as the circles of value radiate out from the church. This "Halo Effect" was used by Partners for Sacred Places in the USA in 2016¹⁰.

COUNTERFACTUALS

Government evaluation guidance (*The Green Book*) recommends that any policy subject to evaluation be compared against an adequate counterfactual – a hypothetical situation that describes the state of the world if the policy intervention had not been carried out (in this case, if church buildings did not exist).

Clearly not all economic activity and wellbeing/social good generated in church buildings would be lost; some of it would still take place in other sectors: volunteers can volunteer elsewhere, repair and maintenance works can take place in other buildings etc. *The Green Book* recommends that evaluations count as impacts only for those outcomes that are additional to the outcomes estimated in the counterfactual situation.

The literature mentions several ways to account for the counterfactual. The most precise one is to commission new research or use results from relevant existing studies (preferably in robust experimental settings) to estimate the outcomes in the counterfactual. A less accurate but easier to implement alternative is to use a percentage correction for additionality (also known as a deadweight adjustment) from guidance that applies broadly to the respective economic sector (e.g. Homes and Communities Agency additionality guidance for housing).

However, for many of the outcomes analysed in this report – community support, social good, emergency food provision – church buildings can be considered a 'provider of last resort'. In some cases these services were provided in church buildings because there was a dire need in the community that was not met anywhere else.

Consequently It is reasonable to assume that the level of provision of these services would be 0 in the absence of church buildings (and also for some other elements such as wellbeing from religious attendance). For this reason we do not apply deadweight adjustments or other forms of counterfactual estimates except for circle 1, which covers direct economic activity (where it is most natural to believe that it can shift to other sectors).

We are therefore not making an economic assessment of what would happen without church buildings, especially since they are not a policy intervention in the direct sense. Rather we are presenting a broad valuation of the social value being created by church buildings in their communities, so as to persuade the public sector, the private sector, philanthropists, and society in general of the value of church buildings as a ready made network of places and people responsive to the needs of the local community. As such they form a vital part of civil society.

^{9.} https://www.gov.uk/government/publications/the-green-book-appraisal-and-evaluation-in-central-governent

^{10.} Thank you to Partners for Sacred Places for the inspiration; we hope we have built on your idea: https://sacredplaces.org/uploads/files/16879092466251061-economic-halo-effect-of-historic-sacred-places.pdf

WELLBEING VALUATION

A very important component not tackled yet in the literature is the wellbeing benefits generated by church buildings. As we have seen, this is explicitly recognised on page five of *The Green Book*, underpinning economic appraisal as social value.

This can include benefits to the people attending church services, volunteering within and through the church, or participating in the various community activities at the church. It also includes the improvements in health and wellbeing of those that the church helps with youth services, mental health support, food banks, and drug and alcohol treatment.

Recently, methodology has been developed to estimate a monetary equivalent for this kind of benefit. This includes wellbeing valuation techniques endorsed by *The Green Book* (2018), such as the income equivalence method of Fujiwara and Dolan (2016), and the very latest thinking in this sector using the Frijters and Krekel (2021)¹¹ valuation of £2,500 per WELLBY, derived from an estimate of what it costs the NHS to produce 1 QALY (a treasury-endorsed measure for quantifying public health outcomes).

We present the most conservative values – using the Frijters valuation of a WELLBY pegged to the NHS costs for a QALY – as our main findings, which leaves room for alternative estimates that are four to six times higher if another wellbeing valuation approach is used (based on the Fujiwara income equivalence approach).

A note on distributional effects

Finally it is important to mention another element of *The Green Book*, 'distributional weighting' (page 77, Appendix 3). The objective of distributional weighting is to understand and recognise that specific policies are likely to have a greater benefit if they work with groups who are most in need. In other words, there is greater social value in helping someone under severe stress from poverty with their mental health and wellbeing than it is to help an affluent, employed person.

Where effects are significant for a group concerned, a clearly presented analysis identifying gaining and losing groups and estimating the effects on their welfare should be carried out¹².

Local churches – and other faith communities – are generally motivated to identify those most in need in their communities and organise a range of activities aimed at addressing these needs. So, in effect, church buildings form a vital national network, or distribution system, contributing to the social care of, and wellbeing within, local communities.

However, where the need for and impact of church social care is greatest, the future of church buildings can be at the greatest risk. Keeping many urban church buildings open is often a financial and practical struggle as local communities have less money available to help maintain them.

It is therefore not surprising that in some places, urban church buildings are at greatest risk of closure, as a recent report by the Church Buildings Council observed. *Churches in the most deprived parishes in the country are far more likely to struggle than those in less deprived areas and even more likely to close*¹³. This is in contrast to the funding provided in the 19th century to build churches and chapels to benefit the industrial poor.

^{11.} Frijters, P., & Krekel C. (2021), Handbook of Wellbeing Policy for the UK. Forthcoming with Oxford University Press. LSE Working Paper. 433 pages.

^{12.} HM Treasury, The Green Book, pages 34 – 35 https://www.gov.uk/government/publications/the-green-book-appraisal-and-evaluation-in-central-governent

^{13.} https://www.churchofengland.org/sites/default/files/2020-02/Struggling_closed_and_closing_churches_report.pdf

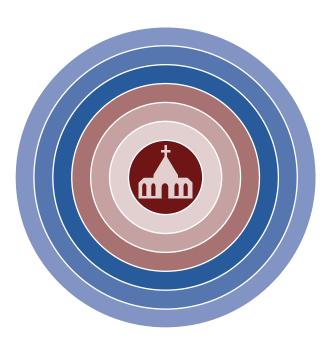
Our data shows that church buildings in deprived areas generate more social value, most probably because they are more likely to be urban and serve larger communities. This makes a strong case in almost all of the market value sections in this report to apply distributional weighting. This enables the market value generated by church buildings to be multiplied by a welfare weight of up to 2.5¹⁴.

We have not applied this weighting to the work; it is a level of analysis that is much more complex and beyond the scope of this study. However, it is mentioned here to give context to the report and to show that the values presented could, quite reasonably, be considered for distributional weighting and multiplication. Not applying this weighting is another factor in being able to confidently say that the values presented in this report are conservative and may be higher.

SUMMARY OF FINDINGS:

A church building, as a 'House of Good', radiates different forms of social and economic value. This can be broken down into market value and non-market value. Each of these consists of three sources of value, as can be seen from Figure 1.

Figure 1. Halo effect of church buildings



Market value of at least £2.4bn per year

- Direct economic value (GVA generated)
 = £1.4bn per year
- 2. Replacement cost of church community services = £200m per year
- **3.** Replacement cost of volunteer hours = **£850m** per year

Non-market, social value of at least £10bn per year

- **4.** Wellbeing value of volunteering = **£165m** per year
- 5. Wellbeing value to individuals benefiting from community good
 = £8.3bn per year
- 6. Additional wellbeing value of weekly church attaendance of = £1.4bn per year

The total economic and social value that church buildings generate in the UK is at least £12.4 billion. This is roughly equal to the total NHS spending on mental health in 2018. This value can be as high as an upper estimate of £62.8 billion, around half of all NHS spending in England in 2018/19¹⁵, if the impacts are valued in alternative monetary wellbeing terms.

The economic and social value of an average church in the UK is over £300,000 per year with this rising to £1.5 million with alternative valuation methods.

This study builds up the economic and social value of church buildings in six circles that radiate out from the hub of the church building. It should be noted that as the analysis moves from circle 1 to 6, the number of assumptions made increases and more caution is attached to the values. Where appropriate, the study recognises and explains these assumptions.

The total social and economic value of church buildings estimated in this study consists of the following:

MARKET VALUE AND COST REPLACEMENT: THE TOTAL IS UPWARDS OF £2.4 BILLION PER YEAR

Market value describes an activity or resource that can be logically and realistically converted into a cash value for the purposes of evaluation. It may be actual money generated, or some equivalent, such as an hour of time or a service given for free in lieu of a wage (e.g., for a volunteer teaching children there is a salary equivalent for a teacher).

The market value is made up of three components.

1. Direct economic value: over £1 billion value added per year by the UK's church buildings

The direct economic value of a church building is created through the day-to-day work carried out in the buildings and from its upkeep and the value of any investments. This includes stipends or employment costs for clergy and staff, money spent on maintenance and repairs, running costs such as heating and electricity, donations of money, revenue generated from hiring out the facilities, and tourism-related income.

These all provide economic value added to the local and wider UK economy – both through direct expenditure and indirect supply chain impacts (because the suppliers from which churches procure goods and services can also spend more as a result) – and can be particularly important in deprived areas.

The money spent or generated through a church building would also increase economic output if it were spent in any other sector. We therefore make several adjustments to try to ensure that we only capture the economic value that is additional.

The direct economic value benefit is measured in Gross Value Added (GVA) terms. Furthermore, adjustments are included for deadweight and displacement.

According to our preferred data source, the National Churches Trust 2020 Survey (which included responses from a wide spread of denominations across the UK with 37% of responding churches not belonging to the Church of England), the estimated total GVA of 40,300 church buildings to the UK economy is about £1.4 billion.

An average church generates £34,389 of direct economic value to the economy each year in GVA terms.

The figures from the National Churches Trust 2020 Survey are consistent with the Church of England's 2017 parish finance data which report very similar figures of £1.2 billion national value and £28,918 per church per year. The detail of the method, data sources and assumptions behind these findings can be found in Section 1 of the Technical Report.

THE VALUE ADDED BY CHURCH BUILDINGS

Hull Minster, Hull HU1 2JJ

Church of England

"That's what a church can bring to society."

Hull Minster is England's largest parish church, built using fine medieval brickwork. Ten years ago, the church was in a very poor state of repair with a tiny congregation. Following the appointment of a new vicar, a major development project transformed the building and the square outside. Hull Minster, Grade I listed, sits at the centre of the commercial and visitor focus of the City of Hull and provides a major attraction for people who then spend their time and money in the city centre. The church is the focus for public events and civic activities and draws people from a wide area to participate. Over the last few years, Hull Minster has been used for a great variety of events. One of these has been the Hull Beer Festival, which used to be held at the Guildhall.

"The beer festival was very controversial when it started here. Since it has been in Hull Minster, the drunken rate has gone down, the number of people getting thrown out has gone down, the abuse that any staff get has gone down. Is that because security has increased? No. What it was, was that it came into a place of reverence and respect. We can have a conversation about Alcoholics Anonymous and alcohol abuse in the same place as being able to enjoy a decent pint of beer. And that's what a church can bring to society."

Alasdair Hutson is Operations Manager at Hull Minster.

Supported by a National Churches Trust Repair Grant 2017

2. Cost replacement for provision of social good – local and national government would need to spend at least £200 million per year to replace the social and community services provided in church buildings

The provision of social and community good, that is, activities organised or supported by the church to help people in the local community, is fundamental to the work and mission of congregations and has been carried out for hundreds of years in and by churches in England, Scotland, Wales and Northern Ireland.

Churches encourage people to help those in need through providing social and community good, including feeding the hungry, sheltering the homeless and comforting the sick. For example, the parable of the Good Samaritan urges people to help others in times of suffering.

As the role of the state has changed through history, the exact nature of the provision of social and community good in church buildings has adapted. In medieval times, churches and religious orders established and ran the first hospitals. In the 19th century, before the setting up of state education, many schools were based in church buildings.

More recently, rough sleeping and food poverty have been tackled by the provision of night shelters and food banks in church buildings. The use of church buildings as agents of welfare in modern times can be interpreted in different ways; some see this form of charitable provision as allowing a flourishing of philanthropy and self help whilst others regard it as an abdication of responsibility by Government.

Social and community good

In this study we focus on four key areas of social and community good provided by churches:

(i) counselling and mental health services (ii) food banks (iii) youth groups (iv) drug and alcohol support

These four key areas are important because of the number and scale of these activities in church buildings. They are also important because of the vital social and preventative health value that these areas of activity provide.

We estimate both the direct costs incurred by a church to provide this social and community good and also as the cost replacement. Cost replacement is the estimated costs to the government (local or national) or other institutions that would arise in providing these areas of social and community good instead of them being provided in a church building.

Taken together, these four activities amount to £124 million per year of value generated in direct costs and at least an additional £82 million per year that would need to be found if this social and community good was not able to take place in church buildings.

The detail of the method, data sources and assumptions behind these findings can be found in Section 2 of the Technical Report.

THE VALUE OF SOCIAL AND COMMUNITY SERVICES

St Stephen's Church, Bowling, Bradford BD5 7BH

Church of England

"Being part of a church group give me a feeling of value and self-worth."

St Stephen's church is in West Bowling in Bradford, an area of multiple deprivation. Sixteen years ago the church was going to be closed down. Today, following substantial repair work and the creation of a flexible community space, the church has a thriving congregation and is home to a charity called SHINE which helps local people with mental and physical health problems, runs a food and clothing bank and runs a job search service and offers advice on budgeting for people on low incomes .

"St Stephen's is more than just a church where you go on a Sunday. It's a community. Some days because of the medical condition I've got, I can't do very much. And they just say, "Oh, just sit down and have a cup of tea." But they still make you feel part of the group. Mood wise, you feel happier, more cheerful. You feel uplifted. You feel positive and you feel as though you've actually achieved something. Which is very nice."

Lindsey Bradshaw has Parkinson's disease and for the past few years has been a regular at Creative Threads, an arts and crafts group, and Well Words which is a creative writing initiative.

Supported by a National Churches Trust Repair Grant 2017

3. Volunteer economic value – the hours given by volunteers in the provision of social and community good in church buildings are valued at £850 million per year

The time given freely by volunteers from the congregation and the wider community is a key element in the provision of social and community good in church buildings. The data from the National Churches Trust 2020 Survey shows that the average total number of volunteer hours provided per church has grown to 214 per month. This is almost double the total hours reported in the National Churches Trust's 2010 Survey.

Providing this level of volunteering by staff paid at the National Living Wage (£8.21 an hour since April 2019) would cost local or national government, or other agencies or organisations, £21,080 per volunteer activity at a church or around £850 million per year for all the UK's churches.

The detail of the method, data sources and assumptions behind these findings can be found in Section 3 of the Technical Report.

THE VALUE OF THE VOLUNTEERING

St Mary's Church, Woolaston, Northamptonshire NN29 7SL

Church of England

"People are no longer isolated."

St Mary's church, Grade II listed, dates back to the 13th century and has had significant Georgian and Victorian alterations. Today, the church, just south of Wellingborough in Northamptonshire, belongs to a group of four churches, and has a lively worshipping community. A recent re-ordering has enabled the church to become a community hub, running activities for young and old, and with a new sound system and screen, even showing the latest films to entertain the people of the village.

Jean Rose started the Mother's Union when she became very aware of the increasing number of elderly and lonely people in the local area.

She said: "I wanted to reach people before depression set in ... to give them a warm, friendly place to go to, where there are people to talk with, where they would be listened to."

"People are no longer isolated, they are more comfortable in the church. It is a very warm and friendly atmosphere. They are happy to talk to the volunteers and happy to share their issues and problems which is a great benefit to their mental health and well-being. Building personal relationships with people is key."

"The community activities we hold in church bring our neighbours through our doors. Our underlying motive is not to get increased attendance figures at Sunday service but to show the love of God to our community."

Jean Rose is PCC Secretary at St Mary's Church.

NON-MARKET (OR SOCIAL VALUE) AND WELLBEING: THE TOTAL VALUE IS UPWARDS OF £10 BILLION PER YEAR

Non-market or social value describes an activity or outcome that has no direct equivalent or easily accessible value to benchmark against in cash terms. It is not possible to directly buy an improvement to our health, happiness or wellbeing, or purchase love and trust from those around us, but we value those things very highly both as individuals and as a society.

There are established ways to measure these non-market, or social values. This report addresses, for the first time in the UK, the non-market value of churches in terms of the wellbeing generated by and through churches and church buildings. It does so through an analysis of church volunteers, the people they help, and the wellbeing value of being part of a church congregation. This wellbeing can be converted into a monetary value using two methods:

- 1. The Fujiwara (2013) three-stage valuation approach¹⁶, recognised in the latest edition of the HMT *Green Book* (2018) and based on calculating a change in income that would offset the wellbeing increase, representing a hypothetical willingness to pay.
- 2. The Frijters and Krekel (2021)¹⁷ WELLBY valuation, benchmarked to the HM Treasury accepted NHS costs for health improvements. This method provides a more conservative and easier to calculate value of £2,500 for each 1-point increase in Life Satisfaction on a 0-10 scale per person per year, which scales up linearly.

In this study we use valuations based on the Frijters and Krekel (2021) analysis as our principal figures, on the basis that it provides more conservative values. However, we need to stress that the true non-market, social value, *may be higher*. For example, the Fujiwara (2013) method generates values that are approximately six times higher. The true figure is likely to lie between these two points, but without further methodological developments in this field, we have opted to err on the side of caution.

4. Wellbeing value of volunteering to volunteers in church buildings is £165 million per year

This report has already presented the potential costs of replacing church volunteers in the provision of social and community good (£850m). In addition to this value, there is also the health and wellbeing benefits of volunteering to those who volunteer.

Here we use the findings from the 'Happy Days' report, a robust panel data econometric study which derives a quasi-causal estimate of the association between volunteering and life satisfaction¹⁸.

This is used alongside survey estimates of the number of regular volunteers in a church and the Frijters and Krekel (2021) WELLBY value. Taken together, the wellbeing value of regular volunteering (at least once a month) that takes place in church buildings in the UK is at least £165 million¹⁹. Extending the scope to include all (not just regular) volunteers and using the other wellbeing valuation methods results in higher values.

The detail of the method, data sources and assumptions behind these findings can be found in Section 4 of the Technical Report.

^{16.} http://eprints.lse.ac.uk/51577/1/dp1233.pdf

^{17.} Frijters, P., & C. Krekel (2021), *Handbook of Wellbeing Policy for the UK*. Forthcoming with Oxford University Press. LSE Working Paper

^{18.} https://www.stateoflife.org/our-work

^{19.} This figure rises to £1bn if we use *The Green Book* recognised Fujiwara wellbeing valuation method.

THE WELLBEING VALUE OF VOLUNTEERING

Sacred Heart church, Tamworth, Staffordshire B77 2EA

Roman Catholic

"People turn to the church because they are in need."

Sacred Heart church dates from the 1960s and serves the Glascote Heath neighbourhood, a mainly residential part of Tamworth with a few convenience stores and pubs. The church is building a new cafe area to help reach more people. With fewer people attending services, it will act as a threshold where people can come and, if they need help, be signposted to services they need.

"I have always volunteered since my children were small. My partner worked and I was able to spend my time in a volunteer capacity. I would take my kids to church and help out. I love working with kids, with the homeless, with people. I hate seeing people struggling, it breaks my heart. I have volunteered at Tamworth church for 3-4 years and before that for 9 years at Sutton Coldfield."

"So many of the community need the church and the space that is there. If the church cannot offer the support, there is no one else to do it. The church is situated in the most deprived area of Tamworth. It is right in the place where the need for help is."

"The vulnerable people in our community really appreciate the help we give. A lot of the people do not go to church to worship, but they turn to the church because they are in need."

Annette Saunders is a volunteer outreach worker at Sacred Heart Church.

5. Wellbeing value to the people who benefit from the social and community good made possible through church buildings is at least £8 billion a year

In the Market Value / Cost Replacement section we examined the social and community good provided in church buildings via counselling and mental health services, food banks, youth groups and drug and alcohol support. This is estimated to be worth at least £200 million annually in terms of what it would cost to replace these services. However church buildings are not distributional hubs of social and community good that exist to save the state money or replace costs. Rather this good is provided by people's desire, rooted in faith, to help those in need and to make their lives better by improving their mental and physical health. This can be defined as wellbeing.

Here we evidence and estimate the value of social and community good provided through church buildings to those that are helped – the beneficiaries. This necessitates some assumptions on the efficacy of community provision and third party sources. We are confident our findings represent a conservative estimate. We provide an outline of how sensitive the values are to changes in some key assumptions in Section 5 of the full Technical Report. At present food banks are by far the most important single social and community good that takes place or is organised in church buildings in terms of their contribution to the welfare of beneficiaries. The demand for food banks has grown significantly in recent years and this is likely to continue to be high in the post COVID-19 pandemic world.

The non-market or social value of food banks in terms of their contribution to the welfare of individuals amounts to over £7 billion annually using the more conservative WELLBY valuation methods (assuming a proportion of 100% of Trussell Trust food banks and 50% of independent food banks being set up or significantly supported by churches). The remaining three social activities considered in this study – mental health services, drug and alcohol support and youth groups – have a combined wellbeing value exceeding £1.3 billion a year. Together, this amounts to an annual total of £8.3 billion

of non-market or social value when measured as the amount of wellbeing benefitting the people who are helped through activities carried out in or through church buildings²⁰. This is equivalent to half the size of the UK care homes sector²¹. The detail of the method, data sources and assumptions behind these findings can be found in Section 5 of the Technical Report.

THE WELLBEING VALUE OF SOCIAL AND COMMUNITY SERVICES

St Mary's Episcopal Church, Port Glasgow, Scotland PA14 6HB

Scottish Episcopal

"The church is where everyone belongs – religious or not."

Port Glasgow is the second largest town in the Inverclyde council area of Scotland. Originally a fishing hamlet and later a port for the city of Glasgow, it grew to be a centre for shipbuilding along the lower Clyde. Port Glasgow was responsible for about a quarter of the tonnage of ships launched on the Clyde. The majority of the male workforce were employed in the shipyards. But as shipbuilding declined only one, Ferguson's yard, remains. As a result, unemployment is high. The present church, which dates from 1984, replaced the original building which was consecrated in 1857.

"Every day there is something happening in the church, it is a big community and people need it. The church is where everyone belongs – religious or not."

"I worked in the shipyards all my life from age of 15 until retirement when I was 62. Three years after retirement I heard about the Clydemen Club run by the church and went along. People feel lost up here, but the club keeps people alive, they talk with pride and reminisce about their work in the shipyard."

"People, for instance an ex-drunk, who are really in need... have had support from the church, where perhaps they would not get elsewhere. Without the church, the impact would be disastrous. We need a place in the community. We feel we are a lost community in this uphill part of Port Glasgow. We need community spirit and we need the church, and jointly, together is what makes it work."

David McLelland, is a member of the church's Clydemen Club.

6. Wellbeing value to people from attending services in church buildings is at least £1.4 billion per year

In addition to the vital good that is provided to the community through church buildings, evidence from large national datasets shows that people who attend services in church buildings feel happier and healthier than those who do not attend.

This is due to a combination of factors. These include social support from interacting with fellow church members and a sense of belonging to a congregation which provides purpose and fulfilment, support and a sense of community. There may also be an increase in wellbeing from being in a church building that is a place of architectural beauty and is important for local history.

Measuring the wellbeing (life satisfaction) increase associated with attending a service in a church building once a week or more is comparable to the perceived benefits of owning a house outright, which on average bestows greater wellbeing (housing security) than renting. It is likewise comparable to the positive impact of living in the North East of England as opposed to London (where people are generally not as happy). Note that this value represents the benefit of regular religious attendance and is not necessarily correlated with religious belief.

^{20.} This figure rises to £50bn if we use The Green Book recognised wellbeing valuation method.

^{21.} https://www.gov.uk/government/publications/care-homes-market-study-summary-of-final-report/care-homes-market-study-summary-of-final-report

To the best of our knowledge, this study is the first to attempt to ascribe a value to the increased levels of wellbeing from attending services in church buildings. The monetary value is strongly dependent on the valuation method. Using 2020 church attendance figures, we calculate that the nationwide monetary wellbeing value of regular church attendance in the UK, using the more conservative WELLBY valuation method, is £1.4 billion²² per year (or £604 per person who attends regularly). For comparison, this is equivalent to 12% of the total NHS spending on mental health in England in 2018/19²³.

The detail of the method, data sources and assumptions behind these findings can be found in Section 6 of the Technical Report.

THE WELLBEING VALUE OF BEING IN A CHURCH

Morriston Tabernacle Chapel, Morriston, Swansea, Wales SA6 8BR

Welsh Independent

"It should be open all the time, vibrant and welcoming"

Morriston is a small town situated about 4 miles outside the city centre of Swansea. Morriston Tabernacle is a Grade I listed, non-conformist independent chapel. It is a massive building situated alongside the shops on the main shopping street of the town and is a Welsh language church.

Victorian industrialisation brought rapid population growth to the lower Swansea Valley, close to the port of Swansea. Welsh Nonconformity enjoyed great popularity; a dozen chapels were built in the Morriston area alone in the latter half of the nineteenth century and Tabernacle, planned as the ultimate evocation of a Welsh chapel in terms of architecture, space and facilities, was completed in 1872.

"Rapid social change occasioned the building of Tabernacle. In today's world where the nature of change is different but no less rapid, this prominent building is a powerful reminder of the lasting merits of Christian, social and cultural values. It should be open all the time, vibrant and welcoming, it should be full of people so they can benefit from the warmth and comfort it gives."

Huw Williams of Morriston Tabernacle Chapel.

²² This figure rises to £9.1bn if we use The Green Book recognised wellbeing valuation method.

²³ https://fullfact.org/health/mental-health-spending-england

SUMMARY VALUE TABLES AND DISCUSSION

Below is an overview of all the categories of economic and social value generated by churches as identified by this study. These are replicated at the end of the full Technical Report. The most conservative value is presented for each instance where multiple valuation methods have been applied.

Table 11A. Summary of the annual economic and social value of churches – UK-wide **All values in £million**

Value category	Direct economic Value	Cost replacement	Social (wellbeing) Value	Total
Church economic activity	1,386			1,386
Church attendance			1,423	1,423
Volunteering		850	165	1,015
Social and community good:				
Food banks	54	15	7,071	7,140
Mental health support	27	20	859	906
Drug/alcohol support	7	24	96	127
Youth groups and activities	37	23	344	404
TOTAL	1,511	932	9958	12,401

Table 11B. Summary of the annual economic and social value of churches – average per church

Value category	Direct economic Value	Cost replacement	Social (wellbeing) Value	Total
Church economic activity	£34,389			£34,389
Church attendance			£35,322	£35,322
Volunteering		£21,080	£4,098	£25,178
Social and community good:				£0
Food banks	£1,330	£393	£175,480	£177,203
Mental health support	£667	£497	£21,338	£22,502
Drug/alcohol support	£172	£607	£2,395	£3,174
Youth groups and activities	£915	£579	£8,548	£10,042
TOTAL	£37,473	£23,156	£247,181	£307,810

The total social value of church buildings in the UK calculated in this study is at least £12.4 billion per year (roughly equal to the total NHS spending on mental health in 2018)²⁴.

This can be as high as an upper bound estimate of £62.8 billion (almost equal to the volume of yearly trade between the UK and China in 2018²⁵ or around half of all NHS spending in England) if alternative valuation methods are used.

file/868378/200227_UK_trade_in_Numbers_full_web_version_final.pdf

^{24.} https://www.england.nhs.uk/publication/nhs-mental-health-dashboard/

^{25.} https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/

The value of an average church building in the UK is over £300,000 per year (rising to £1.5 million with alternative methods), roughly around the level of the yearly turnover of a micro-enterprise with 1-9 employees²⁶. In conducting the analysis for this report we noticed that urban church buildings generate more value than rural ones. We hypothesise that the main reason for this is that urban church buildings, on average, have much larger congregations and serve a larger population.

However, if we express the total value in 'per church building attendee' terms, rural church buildings are almost the same as urban ones, with suburban church buildings trailing behind in terms of value. Another important factor may be that urban church buildings are often located in more deprived communities, where people are more in need or reliant on the community and social good provided in church buildings.

When we further consider that some of the financial values could be higher if distributional weighting was applied to show the benefits which flow to low-income groups, we can see that church buildings can help in tackling inequality, or levelling up. That is because they provide a wide range of benefits to those groups that are most in need of them.

The total social and economic value of a church building is estimated at no less than £307,810 per year. Comparing that to the raw yearly church expenditure average of £82,406 (National Churches Trust 2020 Survey) will yield a net benefit of a church of at least £225,000 and an average benefit-to-cost ratio (also sometimes known as SROI) of a church of 3.74. (This figure rises to as high as 18.1 if we use alternative wellbeing valuation methods that remain consistent with the HMT *Green Book*.)

COVID-19

This study was commissioned prior to the COVID-19 lockdown. During the lockdown, questions were raised as to the future of churches, especially as many had been able to provide both some form of worship and community support virtually.

The National Churches Trust conducted an online survey into the impact of the COVID-19 lockdown on churches in May 2020. 566 churches responded to the survey²⁷.

Key Findings

- Churches were able to respond to the needs of local people during the lockdown. Around 34% of churches said they were able to fully continue their existing support, and around 55% said they continued partially. This means that a vast majority, around 89%, of churches continued to provide some form of support.
- Churches set up a wide range of new community support services and forms of worship during the COVID-19 lockdown. The top five new activities were: making contact with isolated or vulnerable people, online worship, telephone befriending, shopping and/or delivery of shopping or essential supplies and online support groups.
- The closure of church buildings had a seriously negative impact. Around 75% of churches taking part in the survey said that closing their church during the lockdown had a negative effect on the community.
- Churches will be important to the local community in the future. 64% of respondents said that churches will become more important in the future as a result of COVID-19.
- Following COVID-19, people said they would be most looking forward to togetherness/ companionship, closely followed by religious service and being able to gather together in the church building again. Using a weighted average on a scale of 1-5, 5 being the highest, companionship/togetherness came out with a score of 4.89, religious services 4.41 and being in the building again 4.14.

^{26.} https://www.merchantsavvy.co.uk/uk-sme-data-stats-charts/

^{27.} National Churches Trust - State of the Churches COVID-19 Report

CONCLUSIONS

Churches are a ready-made network of places and people that respond to the needs of the local community.

- The total social value of church buildings in the UK is at least £12.4 billion a year (roughly equal to the total NHS spending on mental health in 2018)²⁸.
- This figure could be as high as £62.8 billion (almost equal to the volume of yearly trade between the UK and China in 2018²⁹ or around half of all NHS spending in England)³⁰ if the impacts are valued in alternative monetary wellbeing terms.
- Urban and rural churches generate roughly the same amount of social value per person. However, urban churches generate more total social value than rural churches – especially in deprived urban areas, where they are also at greatest risk of closure.
- Cost benefit analysis shows that for every £1 invested in church buildings there is a Social Return on Investment of £3.74 using the most conservative methods. This can go up to £18.10 when alternative wellbeing valuation methods are used. There is no question that church buildings provide a strong, positive return on every £1 invested.
- This report has, at almost every stage, used the most conservative estimates and has not included all areas of social and community care. It does not include other areas of potential value for church buildings in terms of tourism, heritage and non-use value. We recommend that further research be undertaken to expand on the range of measures of value of church buildings.

The risk is greatest where the need is greatest

In providing and hosting food banks, youth groups, drug and alcohol support and mental health support, amongst many other activities that help society, churches often work with those people and communities in greatest need, as they have always done.

The analysis shows that church buildings situated in deprived areas (which are largely but not exclusively urban) have bigger numbers of beneficiaries and therefore higher social value per church.

Furthermore it is worth noting that church buildings generate economic value by improving the revenues of local business in the neighbourhood whenever the building, religious services or community activities attract visitors and tourists to the neighbourhood. This is an important component of the value of churches that has yet to be quantified reliably and therefore beyond the scope of this paper.

In any society, and in particular in today's multifaith and also secular society, there will always be questions around belief – such as the nature of God, the person and teaching of Jesus, and the authority and relevance of the Bible. This can mean that church buildings are seen as places that are irrelevant to the lives of those who do not have a Christian faith.

Yet our report demonstrates that church buildings are places that generate social good for the benefit of people regardless of their faith and for our society more generally. Each church building in this sense is a House of Good that we can all believe in.

30. https://www.kingsfund.org.uk/projects/nhs-in-a-nutshell/nhs-budget

^{28.} https://www.england.nhs.uk/publication/nhs-mental-health-dashboard/

^{29.} https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/

file/868378/200227_UK_trade_in_Numbers_full_web_version_final.pdf

CAVEATS

As this is a pioneering study, aspects of this report and its findings are naturally open to challenge. We therefore welcome the opportunity to have our findings discussed and challenged so as to allow them to be strengthened over time. Additionally, we would highlight the following points.

- 1. Out of the many possible valuation methods we have almost always taken the lowest possible value. These could be between four and six times higher had an alternative valuation method been used.
- 2. Despite church buildings clearly being places that often work with those most in need in society, in our analysis we have treated the benefit to all people as equal and have not applied any distributional weighting. The effect of this assumption is to underestimate the true social impact in the market value figures.
- 3. This study only values four key areas of social good that are made possible through church buildings and has not included the coffee mornings, nursery groups and other numerous community activities that no doubt help people feel supported, healthier and happier in their lives/community.
- 4. The role of churches as kickstarter, catalyst and social entrepreneur is not valued. We only assessed the time committed by churches to running the social and community services in their buildings. There is a significant added value to church buildings as they are often incubators of new ways of helping the community. These can be small and locally based³¹ or can develop into national organisations such as The Samaritans which was originally set up by Rev Chad Varah in the church of St Stephen Walbrook in the City of London.
- 5. Many churches are historic buildings, a vital part of our national heritage and of the tourism economy. Previous studies by Nesta and Simetrica³² have shown some valuable insights into the heritage value of other tourist attractions in England museums, historic cities and cathedrals. These range between £6.40 and £9.60 per visitor (in the hypothetical situation that visits were paid for). While not directly applicable to local or parish church buildings, this is supporting evidence that church buildings, including local churches and chapels, will certainly have additional heritage value for their communities.

^{31.} https://www.cinnamonnetwork.co.uk/current-projects-in-incubation/

^{32.} https://www.nesta.org.uk/blog/valuing-culture-and-heritage-results-new-research-museums-historic-cities-and-cathedrals/

FULL TECHNICAL REPORT

1 DIRECT ECONOMIC VALUE

Methodology

The direct economic value of a church building is based on the money flowing into and out of the institution (spending on staff, repairs, servicing the building and money in from donations, stipends and revenue generated from hiring out the facilities), adjusted to take into account the benefits to the local and wider UK economy from the effect of church expenditure spilling down the supply chain (more details further below).

The total annual expenditure of a church building is estimated from several sources:

- **1.** The 2020 National Churches Trust Survey, which asks respondents to estimate the total annual expenditure of the church.
- **2.** The National Churches Trust 2010 Survey, which includes a question on spending on repairs only (in the last 3 years). The 2010 data is less up-to-date, but the sample size is bigger (7,237 in 2010 vs. 1,050 in 2020).

The National Churches Trust 2010 Survey also includes a question on the typical percentage breakdown of annual expenditure into constituent components. We can use the average reported percentage expenditure on maintenance together with the monetary spend on repairs to construct a proxy estimate of total annual expenditure.

3. The Parish Finance Statistics 2017¹ report produced by the Church of England provides a good level of detail of total annual expenditure at England-wide level, along with the number of churches it covers. Although it refers to Anglican churches only, the data can be scaled up to the entire church population in the UK under the assumption that the spend of Anglican churches is also representative of other denominations.

1. https://www.churchofengland.org/sites/default/files/2019-06/2017ParishFinanceStatistics.pdf

To this annual expenditure figure we apply a series of adjustments as recommended by multiple government guidance documents, including the HMT *Green Book*: adjustments for deadweight, displacement, inflation, and Gross Value Added (GVA) effects based on UK-wide 2015 Input-Output Analytical Tables².

- **GVA and multiplier effects** Church expenditure helps to employ skilled tradespeople and others in the wider economy. This has a positive impact on the economy in terms of those directly employed and those in the wider supply chain. This is normally accounted for by using economic multipliers such as the Leontief Multiplier calculated in the national Input-Output tables. To be more conservative, we opt for the GVA effect from the Input-Output tables rather than the output multiplier. The GVA effect only counts the value added generated by an increase of one unit in demand, rather than the total output increase, and does not include increases in taxes (which are transfers to the Government) and imports. This is a more accurate reflection for the purposes of this study, which assesses UK-wide benefits (details in notes below Tables 1A-1C).
- **Deadweighting** any kind of economic benefits are assessed against a counterfactual, which is the position in terms of target outputs and outcomes that would occur if the intervention was not implemented (in our case, if churches did not exist). The quantification of outputs and outcomes that would still have happened under the counterfactual is referred to as deadweight. Due to the lack of resources available to conduct a detailed counterfactual analysis, we apply a proportional reduction to account for deadweight, in line with guidance referenced in the HCA Additionality Guide³ (details in notes below Tables 1A-1C).
- **Displacement** This is the proportion of intervention outputs/outcomes accounted for by reduced outputs/outcomes elsewhere in the target area. Similarly to the above, we apply a proportional reduction estimated by other government-endorsed studies to account for displacement (details in notes below Tables 1A-1C).
- Leakage This is defined as the proportion of outputs that benefit those outside the intervention's target area or group. Since the target area in our case is the whole of the UK, leakage adjustments to account for parts of the output flowing out to neighbouring areas are not required. Economic flows from outside the UK (e.g. imports) are accounted for by using GVA effects as mentioned above.
- Inflation As we use information originating from different points in time, it is important to adjust for changes in the price level occurring over the years. We use inflation information from the Bank of England⁴ to account for this.

Finally, the obtained numbers would be an average value for one church. We need to scale this up to the total number of churches in the UK, estimated at 40,300 in a study carried out for the National Churches Trust by The Brierley Consultancy.⁵

^{2.} https://www.ons.gov.uk/economy/nationalaccounts/supplyandusetables/datasets/ukinputoutputanalyticaltablesdetailed

^{3.} https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/378177/ additionality_guide_2014_full.pdf

^{4.} https://www.bankofengland.co.uk/monetary-policy/inflation/inflation-calculator

^{5.} https://www.nationalchurchestrust.org/news/holy-spirit-uk-has-more-churches-pubs

Findings

The monetary values obtained by applying the methodology described above are presented in Tables 1A-C below. According to our prefered data source, the National Churches Trust 2020 Survey (Table 1B), the estimated total direct economic value of the 40,300 churches in the UK is about £1.386 billion per annum in GVA terms. Our confidence in this result is increased by the fact that administrative data from the 2017 Church of England Parish Finance Statistics produce a similar value. The other sources are provided for triangulation and provide further lower and upper bound estimates.

Urban Category Rural Suburban All Amount spent on repairs and maintenance over 3 years £69,760 £68,483 £59,297 £81,904 Yearly spend on repairs £23,253 £22,828 £19,766 £27,301 % of total annual expenditure alloted to maintenance 19.94% 21.81% 17.42% 18.05% Estimated total annual church expenditure £116,626 £104,666 £113,465 £151,254 GVA effects from Input Output tables 0.823 0.823 0.823 0.823 Deadweight adjustment 0.57 0.57 0.57 057 0.89 0.89 0.89 0.89 Displacement adjustment Inflation adjustment 2008 to 2019 1.344 1.344 1.344 1.344 Final annual additional economic value per church £65,413 £58,705 £63,640 £84,835 Estimated number of churches in the UK 40,300 Estimated total market value of churches £2,636M

Table 1A. Economic value of church buildings according to National Churches Trust 2010 Survey data

Table 1B. Economic value of church buildings according to National Churches Trust 2020 Survey data

Category	All	Rural	Suburban	Urban
Average annual church expenditure	£82,406	£46,878	£108,496	£148,054
GVA effects from Input Output tables	0.823	0.823	0.823	0.823
Deadweight adjustment	0.57	0.57	0.57	0.57
Displacement adjustment	0.89	0.89	0.89	0.89
Inflation adjustment	1	1	1	1
Final annual additional economic value per church	£34,389	£19,563	£45,277	£61,786
Estimated number of churches in the UK	40,300			
Estimated total market value of churches	£1,386M			

Table 1C. Economic value of church buildings according to 2017 CofE Parish Finance Statistics

Number of parishes covered by report	12,365
Number of churches covered by report	15,583
Total Expenditure £m	1018.7
Average annual expenditure per church	£65,373
GVA effects from Input Output tables	0.823
Deadweight adjustment	0.57
Displacement adjustment	0.89
Inflation adjustment 2017 to 2019	1.060
Final annual additional economic value per church	£28,918
Estimated total market value of churches	£1,165M

The assumptions underlying the calculations in Tables 1A-1C are listed below:

- Average spend on repairs and maintenance according to National Churches Trust 2010 Survey data is £69,760 per church in the last three years. We divide this by three to obtain the £23,253 yearly value.
- The proxy for total annual expenditure in the National Churches Trust 2010 Survey is obtained by dividing the yearly average spend on repairs and maintenance by the % of annual expenditure that is devoted to repairs and maintenance stated by respondents (average of 19.94%).
- The 2020 Survey elicits total annual church expenditure directly and therefore does not require this proxy calculation. However, as a plausibility check, we also asked about expenditure on repairs and maintenance and the average value in the 2020 Survey is £18,042, which makes the average proportion of annual expenditure devoted to repairs 21.89%, very close to the 2010 value.
- The GVA effect is an average of GVA effects for several economic activities of Non-Profit Institutions Serving Households (NPISH) taken from the 2015 Input-Output Analytical Tables provided by the ONS, because there is no direct category for activities of churches. The activities we considered are:
 - Services to buildings and landscape
 - Education services
 - Human health services
 - Residential care and social work activities
 - Creative, arts and entertainment services
 - Libraries, archives, museums and other cultural services
 - Sports services and amusement and recreation services
 - Services furnished by membership organisations
- The GVA effect rather than the output multiplier is used in order to set aside (also known in technical terms as partialling out) the share of output that is accounted for by increases in taxes and imports, and only count additional economic value.
- The deadweight and displacement adjustments are taken from the Homes and Communities Agency Additionality Guide⁶ (Table 3.2, page 20 – 43% and Table 4.6, page 30 – 11% respectively).
- No leakage is taken into account because we are interested in UK-wide economic value rather than a value confined to a local area.
- Inflation is taken from the Bank of England inflation calculator with the following reference years: 2008 to 2019 for the 2010 National Churches Trust Survey, 2017 to 2019 for the CofE Parish Finance Statistics 2017; no inflation adjustment for National Churches Trust 2020 Survey (reference year 2019 for financial data).
- The CofE Parish Finance Statistics cover Anglican churches only. Therefore we assume that the expenditure of Anglican churches is representative of all churches in the UK. This would seem a reasonable assumption in the absence of contradictory data from other Christian denominations such as Catholic, Methodist and Charismatic churches.
- Similarly, in the National Churches Trust 2010 Survey data we assume that the 4,885 churches that responded to the repair spend question and respectively the 3,630 churches that provided the % breakdown of annual expenditure on maintenance are representative of the entire church population. And likewise in the National Churches Trust 2020 Survey we have a sample of 612 churches providing financial data (out of the total sample of 1,050).
- The total number of churches in the UK is estimated at 40,300 in a study carried out for the National Churches Trust by The Brierley Consultancy and published in April 2019⁷.

7. https://www.nationalchurchestrust.org/news/holy-spirit-uk-has-more-churches-pubs

^{6.} https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/378177/ additionality_guide_2014_full.pdf

2. COMMUNITY AND SOCIAL GOOD – WHAT WOULD IT COST TO REPLACE THE INVESTMENT OF CHURCHES IN THEIR LOCAL COMMUNITIES?

Introduction

Social action, that is, activities organised or supported by churches to help people in the wider community, has been strongly on the rise in the last decade. Spencer (2016)⁸ provides a very convincing narrative of this situation, drawing upon multiple sources in the literature to illustrate this trend. To name a few examples, The Church Urban Fund (2017)⁹ found that 94% of Church of England churches were actively addressing and acting on at least one social care issue in their local area, with 70% running three or more activities. Churches in the most deprived areas are the most active in their communities in terms of the range of activities they run, with 34% of them running six or more of the activities listed (e.g. night shelters, debt advice, job clubs). Most churches are also involved in supporting people with mental health problems (83%), family breakdown (86%), and loneliness (94%)¹⁰.

Commenting on the results of the longitudinal National Church Social Action Survey, Knott (2014)¹⁰ remarked that the average number of community activities organised by a church rose from 4.9 in 2010 to 7.4 in 2012 to 8.9 in 2014, an 81% increase over four years. Also over this time, the number of volunteer hours on church social action increased by 59%, staff hours increased by 19%, and expenditure on social action rose by 36.5%.

The National Churches Trust Surveys (2010 and 2020) provide data on a breakdown of 25 community activities – churches were asked whether they perform these activities and the 2010 edition also asks how many hours a month they organise them if they do. The proportion of churches involved in each of these activities (including the evolution from 2010 to 2020) and the average number of hours per month in 2010 is presented in tables 2A-2C.

We do see a confirmation of the strong upward trend in social good provided in church buildings if we compare the 2020 data to 2010. The number of churches involved in any community activities rose from 72% to 89% over the last decade. Furthermore it is worth noting that while a large majority of social good is more frequent in urban churches, there are some activities that are provided more frequently in rural churches – bell-ringing, flower festivals, farmers' markets, and also library and post office services (which, although provided very infrequently, have a much higher number of hours per month for the churches that do provide them in the 2010 survey, where data is available).

^{8.} https://www.theosthinktank.co.uk/cmsfiles/archive/files/Doing%20Good%205.pdf

^{9.} https://cuf.org.uk/resources/church-in-action-a-national-survey-of-church-based-social-action

^{10.} https://jubilee-plus.org/docs/Report-National-Church-Social-Action-Survey-2014-Full.pdf

Table 2A. Share of churches involved in various forms of community social good

National Churches Trust 2010 Survey data

Type of Community Service	Rural	Suburban	Urban	All
Community activities – any	62.0%	80.9%	84.0%	72.3%
Personal finance support/debt counselling/credit union	1.3%	7.6%	10.3%	5.1%
Housing and homeless support	1.3%	9.0%	13.1%	6.2%
Drug/alcohol support	2.2%	11.6%	18.2%	8.6%
Support for people with mental health problems	2.2%	14.7%	19.4%	9.6%
Other forms of counselling/advice, e.g. career/IT training	2.6%	12.3%	17.4%	8.7%
Crime prevention/youth offender programmes	2.9%	7.6%	12.4%	6.5%
Campaigning, e.g. Fair Trade	14.4%	33.5%	33.4%	23.9%
Social enterprise/community business	2.8%	7.1%	7.3%	5.0%
Adult education, e.g. language lessons	4.5%	15.4%	17.5%	10.4%
Church educational visits for children	30.7%	43.5%	48.4%	38.3%
Mobile library	0.6%	1.4%	1.2%	1.0%
Genealogical/family history research support	9.8%	7.1%	9.0%	9.0%
Informal meetings, e.g. coffee mornings, over 60s club	37.7%	69.7%	72.3%	54.3%
Parenting support	5.0%	17.4%	21.3%	12.2%
Nursery/pre-school	11.2%	30.3%	33.7%	21.5%
Youth groups – Scouts/Cubs/Beavers/Guides/Brownies	16.3%	46.0%	50.8%	32.3%
Activities for young people, e.g. sports clubs/holiday	17.2%	38.8%	44.7%	29.4%
Healthy living support, e.g. slimming groups, personal fitness	7.6%	29.3%	31.5%	19.0%
Art, music, theatre, dance, e.g. exhibitions, lessons	34.5%	44.4%	48.4%	40.5%
Local Post Office	0.9%	0.2%	0.8%	0.7%
Polling Station	6.5%	18.6%	22.0%	13.4%
Shop/Cafe	5.3%	14.9%	17.1%	10.6%
Farmers' Market	0.6%	1.4%	0.9%	0.9%
Flower festivals	18.9%	12.3%	10.1%	15.1%
Bell-ringing and/or organ-playing	35.5%	23.2%	22.6%	29.3%
Sample size	3163	1521	1635	6319

Table 2B. Share of churches involved in various forms of community social good

National Churches Trust 2020 Survey data

Type of Community Service	Rural	Suburban	Urban	All	2010
Any community activity	83.5%	98.7%	96.8%	89.4%	72.3%
Food banks and other food distribution to people in need	44.7%	75.0%	76.7%	58.0%	N/A
Support for people with mental health problems	20.6%	39.1%	41.5%	29.0%	9.6%
Drug/alcohol support	2.7%	13.9%	25.4%	10.4%	8.6%
Youth groups and activities for young people	28.6%	66.2%	57.6%	42.4%	41.5%
Personal finance support/debt counselling/credit union	3.5%	13.9%	14.9%	8.2%	5.1%
Housing and homeless support	6.7%	24.7%	34.5%	16.8%	6.2%
Other forms of counselling/advice, e.g. career/IT training	9.8%	27.3%	31.5%	18.3%	8.7%
Crime prevention/youth offender programmes	2.0%	6.7%	7.7%	4.2%	6.5%
Campaigning, e.g. Fair Trade	15.5%	35.8%	33.2%	23.4%	23.9%
Social enterprise/community business	5.5%	13.3%	17.1%	9.8%	5.0%
Adult education, e.g. language lessons	3.9%	12.7%	20.7%	9.6%	10.4%
Church educational visits for children	35.6%	51.3%	47.1%	41.2%	38.3%
Mobile library	0.8%	0.7%	0.9%	0.8%	1.0%
Genealogical/family history research support	13.9%	11.3%	9.9%	12.5%	9.0%
Informal meetings, e.g. coffee mornings, over 60s club	56.7%	85.4%	83.9%	68.4%	54.3%
Parenting support	5.7%	19.3%	19.3%	11.5%	12.2%
Nursery/pre-school	14.3%	42.7%	30.2%	23.2%	21.5%
Healthy living support, e.g. slimming groups, personal fitness	10.6%	40.4%	41.3%	23.4%	19.0%
Art, music, theatre, dance, e.g. exhibitions, lessons	49.9%	62.7%	64.1%	55.7%	40.5%
Local Post Office	0.6%	0.0%	0.0%	0.3%	0.7%
Polling Station	6.7%	29.8%	27.9%	16.0%	13.4%
Shop/Cafe	10.4%	24.7%	28.8%	17.5%	10.6%
Farmers' Market	2.0%	2.0%	0.5%	1.6%	0.9%
Flower festivals	29.3%	16.0%	13.5%	23.0%	15.1%
Bell-ringing and/or organ-playing	42.2%	30.0%	32.0%	37.6%	29.3%
U3A (University of the Third Age)	6.3%	12.0%	15.8%	9.6%	N/A
Blood donation	1.2%	0.7%	2.7%	1.5%	N/A
Lunch clubs (for the elderly, people with Alzheimer's etc)	22.0%	42.4%	48.6%	32.2%	N/A
Sample size	510	152	223	885	6319

National Churches Trust 2010 Survey data

Type of Community Service	Rural	Suburban	Urban	All
Personal finance support/debt counselling/credit union	4.2	6.3	8.3	7.1
Housing and homeless support	2.0	13.1	11.7	11.2
Drug/alcohol support	5.8	12.5	14.1	12.5
Support for people with mental health problems	7.1	12.2	12.3	11.7
Other forms of counselling/advice, e.g. career/IT training	6.3	6.2	11.0	8.7
Crime prevention/youth offender programmes	2.7	3.4	5.2	4.2
Campaigning, e.g. Fair Trade	1.6	2.7	3.2	2.6
Social enterprise/community business	4.4	18.5	11.9	12.1
Adult education, e.g. language lessons	5.8	10.1	13.2	10.5
Church educational visits for children	1.1	1.4	1.7	1.4
Mobile library	18.3	2.4	9.7	9.9
Genealogical/family history research support	1.3	3.4	1.7	1.8
Informal meetings, e.g. coffee mornings, over 60s club	6.9	13.0	14.4	11.4
Parenting support	3.7	4.9	6.3	5.3
Nursery/pre-school	18.7	27.0	33.3	27.4
Youth groups – Scouts/Cubs/Beavers/Guides/Brownies	9.9	15.6	16.9	14.7
Activities for young people, e.g. sports clubs/holiday	5.9	8.4	9.5	8.1
Healthy living support, e.g. slimming groups, personal fitness	7.2	9.8	9.9	9.3
Art, music, theatre, dance, e.g. exhibitions, lessons	4.2	8.2	10.7	7.3
Local Post Office	13.5	5.7	6.8	11.1
Polling Station	1.2	1.3	1.7	1.4
Shop/Cafe	13.3	19.6	25.1	20.3
Farmers' Market	4.4	12.3	9.1	8.5
Flower festivals	1.4	1.5	1.7	1.5
Bell-ringing and/or organ-playing	5.4	8.4	7.5	6.4

Note however that while the lists in tables 2A, 2B and 2C paint pictures of the abundant community and social good provided in church buildings in the UK, identifying the economic value of each and every one of these activities would result in an enormous study. For this first look at the value of the church building as a host for social value we have chosen to focus the economic valuation on the following four pivotal community activities:

- Counselling and mental health support
- Food banks
- Youth groups
- Drug and alcohol support

We are focusing on these four key areas because of the frequency with which these activities are provided in church buildings (based on the survey data presented above) and a working knowledge of the social and preventative health value that these activities provide. Note that these four activities constitute only a fraction of the total hours spent by churches on all community activities¹¹. Therefore there are significant amounts of value left uncovered by this analysis – an important gap for further research.

A note on food banks

Unlike the other three activities, food banks were not included in the 2010 National Churches Trust Survey. This is because the massive church involvement in running food banks is a relatively recent development. The Trussell Trust network (an NGO and charity responsible for running around 60% of the food banks in the UK), reported an increase in three-day food parcels provided from 61,000 in 2010/11 to 1,583,000 in 2018/19. Similar growth has been observed in non-Trussell Trust food banks, with 75% opening in the last nine years (Loopstra et al. 2019). Knott (2014) confirms that food distribution experienced massive growth as an activity that churches are involved in: from 8% of churches in 2010 to 61% in 2012 and 80% in 2014¹². This is not necessarily churches hosting food banks, but may involve forms of support such as donating food or providing volunteers. The Church Urban Fund (2015) report presents a slightly lower but still massive growth – from 33% in 2011 to 66% in 2014.

The Trussell Trust State of Hunger report¹³ details the reasons for this growth in food banks in the past decade. A significant factor is the changes in government welfare policy (86% of people using food banks in the Trussell Trust network rely on state benefits) alongside housing costs, stagnant wages and rising living costs. The hypothesis is that changes to welfare payments led many more working age people into poverty and food insecurity, making them dependent on church-supported food banks¹⁴ as a last resort to shield them from hunger (Sosenko et al. 2019 and Loopstra et al. 2019). The Trussell Trust, State of Hunger report concludes:

'There are grounds for serious concern about the situation facing many households on the lowest rungs of the economic ladder, not least the serious adverse effects of food insecurity, hunger and destitution on people's health and wellbeing.'

We therefore include food provision in our valuation exercise and, as part of this study, we have included a series of detailed quantitative questions that provide the first ever inputs required to assess the scale of the benefits that church buildings bring to society with their food provision activities.

We can see in Table 2B above that according to the National Churches Trust 2020 Survey, the number of churches running, helping with, or supporting a food bank is 58%, but in urban and suburban areas over three quarters of the churches are involved, confirming trends shown in the literature. Aside from food banks as mentioned above, mental health support experienced one of the most pronounced increases, with 29% of churches providing it, up from 9.6% in 2010.

^{11.} Summing up average hours spent on these four activities in the 2020 survey (multiplied by the proportion of churches involved in the activities) by the total average hours spent on all 25 community activities in the 2010 survey yields 83%. The true estimate is likely to be smaller as hours spent on social action have grown from 2010 to 2020. But we are unable to perform same-year comparisons because we only collected hours/month information on these four activities in 2020. Using the 2010 data only, three of the four activities (excluding food banks) constitute 26% of the total social action hours - data on food banks in 2010 is not available.

^{12.} https://jubilee-plus.org/docs/Report-National-Church-Social-Action-Survey-2014-Full.pdf

^{13.} https://www.stateofhunger.org/wp-content/uploads/2019/11/State-of-Hunger-Report-November2019-Digital.pdf

^{14.} Food banks in the Trussell Trust network are supported by churches in a variety of ways. In many cases churches are heavily involved, providing input to governance, venues, and volunteers. In others their involvement takes the form of providing donations of food or money. Most food banks involve multiple churches which may support the food bank in different ways.

Methodology

We split cost-based values of church social good into two different components:

- Direct costs these are the expenses actually incurred by the church when organising this activity and represent the church's direct monetary contribution to social welfare¹⁵. These are taken directly from the National Churches Trust 2020 Survey question asking respondents to estimate monthly expenses for providing each of the four community activities.
- Replacement costs these are the costs that an alternative institution would incur in order to provide these services. The alternative institution is the one normally associated with or responsible for the provision of such services, and can be state (e.g. the NHS), third-sector (e.g. youth charities) or even private (food retailers). More details on deriving cost replacement values follow below.

Two main components are required to obtain the cost replacement value of an activity: the unit quantity and the unit cost of the activity.

The unit quantity is a measure of the amount of the activity performed in (or with the help of) the church building within a time period of reference (one year in this study). This can be the number of hours per year the activity is held or another measure for which we can find a corresponding unit price, such as the number of participants in the activity over the course of a year, the number of resources used/provided etc.

The unit cost is an estimate of the expenses to provide a unit of this activity incurred by the institution normally responsible for providing it – for example, the NHS in the case of mental health and drug/alcohol support, nurseries for day care activities, state schools for educational activities, organisations such as the Scouts for youth groups.

Details of the chosen unit cost estimates are provided below. Note that a unit cost estimate found in the literature may not cover all the costs associated with providing the activity, so one may have to settle with just including an important component rather than the entire cost of provision.

We discuss data sources for all inputs into the valuation for each of the two components below.

Component 1 – direct costs

The National Churches Trust 2020 Survey asks respondents to report estimates of the total monthly costs incurred by the church for providing the four key community activities mentioned above, if their church is involved in these activities. This total cost estimate can be scaled to a yearly value and used directly. Note that because only churches involved in the activity will have provided this data, we also need to multiply by the estimated proportion of churches doing this activity in order to arrive at a national aggregate value. These findings are presented in Table 3A. Note that as standard, cost estimates in business case evaluations are uprated by between 10%-20% to account for optimism bias (the fact that people tend to underestimate the true cost of investments). We do not apply optimism bias correction to this data, in order to provide a more conservative estimate for the direct cost evaluation.

Component 2 – replacement costs to society

Unit costs data for the four activities to be valued can be obtained from the following sources (these findings are presented in Tables 3B and 3C further below). Note that more detailed unit quantity data was also collected in the National Churches Trust 2020 Survey, which allows us to improve the accuracy of the estimates. All alternatives are reported below:

- Counselling and mental health support For the unit cost, we take the cost per hour of a community-based nurse (band 5) from the PSSRU Unit Costs of Health and Social Care 2019¹⁶, page 117 equal to £37. The corresponding unit quantity is the number of hours per year the activity is provided by a church on average, taken from the National Churches Trust 2010 and 2020 Survey data and scaled to a yearly value.
- Drug and alcohol support For the unit cost, we take the cost per hour of an alcohol health worker/alcohol liaison nurse/substance misuse nurse from the PSSRU Unit Costs of Health and Social Care 2019, page 51 equal to £47 (without including qualifications). The corresponding unit quantity is also the number of hours per year the activity is provided by a church on average, taken from the National Churches Trust 2010 and 2020 Survey data and scaled to a yearly value.
- Youth groups and activities for young people For the unit cost we can derive an average yearly cost per member estimate by consulting the latest annual reports of the two biggest organisations in the UK running organised youth programmes Scouts and Girlguiding¹⁷. From the financial statements we extract the total expenditures on charitable activities in the most recent financial year and divide it by the organisation's total youth membership. The corresponding values are £64.48 per member for Scouts and £33.99 for Girlguiding we use an average of the two and multiply it by the number of yearly beneficiaries from Knott (2014)¹⁸, page 11 youthwork + children's clubs, or from the National Churches Trust 2020 Survey. Another source is to value the youth activities per hour by using the cost of provision extracted by Grossman et al. (2009)¹⁹ in the USA. The final value per hour is a weighted average of the calculated costs for programmes for middle school children (weight = 0.5) and teens (weight = 0.5) during school year time (weight = 0.75) and summer time (weight = 0.25), which is then converted from 2005 US dollars into pounds at the 2005 exchange rate and afterwards adjusted to 2019 price levels.
- Food banks and other food distribution activities to people in need The Trussell Trust provides some guantitative data at the aggregate level which can be used to infer a monetary value of this activity. There are several alternatives. First, information from the State of Provision report (unpublished) on the yearly running costs for operating a food bank – this may overstate the true value because there is no guarantee that all costs are provided for by a church building. Second, information from the State of Hunger report (Sosenko et al. 2019)²⁰ reveals the number of food parcels distributed over the course of a year (consisting of three days' worth of food), which we evaluate at the cost of £7.57 per parcel (Caraher and Furey 2018)²¹ – this almost certainly understates the true value because there are other costs involved in running a food bank besides the cost of food itself (e.g. the staffing and human inputs to the food bank). To scale these values to cover non-Trussell Trust food banks as well, we make the assumption that a) all of the 1261 TT food banks are based in or receive some form of support from churches (hypothesis advanced after consulting relevant stakeholders) and b) half of the remaining 809 independent food banks are supported by churches (total number from Sosenko et al. 2019 and proportion supported by churches from Loopstra et al. 2019)²². The National Churches Trust 2020 Survey provides an alternative, more direct source as it asks about the number of meal vouchers handed out by a church.

^{16.} https://kar.kent.ac.uk/79286/

^{17.} Scouts Annual Report 2018/19, Girlguiding Annual Report 2018

^{18.} https://jubilee-plus.org/docs/Report-National-Church-Social-Action-Survey-2014-Full.pdf

^{19.} http://blogs.edweek.org/edweek/time_and_learning/The-Cost-of-Quality-of-Out-of-School-Time-Programs.pdf

^{20.} https://www.stateofhunger.org/wp-content/uploads/2019/11/State-of-Hunger-Report-November2019-Digital.pdf

^{21.} https://pure.ulster.ac.uk/en/publications/the-differential-cost-of-an-emergency-food-parcel-and-a-consensua

^{22.} https://www.foodaidnetwork.org.uk/independent-food-bank-survey

The National Churches Trust 2020 Survey asks the respondents to report estimates of the unit quantities of the four key community activities. The survey asks for the number of hours the activity is performed in a month and also for other key inputs such as the number of food parcels given out (for food banks) or the number of yearly beneficiaries (needed here for youth groups in particular). This unit quantity data can be combined with unit cost data mentioned above to obtain an alternative valuation with more up-to-date inputs. This is presented in Table 3C.

As a final note, for the per church values provided below, the aggregate value has been evenly spread across all 40,300 churches active in the UK (by multiplying by the proportion of churches involved in the respective community activity). Another way to look at the average per church value would be to consider for each activity only the churches that are involved in that kind of activity (i.e. per church average for churches actually involved). These calculations are available on request.

Findings

The numbers described above are presented in the three tables below and later synthesised in table 3D to provide an overview of the values of these four community activities delivered in church buildings in the UK.

Type of Community Activity	Rural	Suburban	Urban	All	UK-wide yearly value
Food banks	£71	£403	£4,881	£1,330	£53,587,232
Mental health support	£286	£283	£1,798	£667	£26,894,592
Drug/alcohol support	£22	£57	£601	£172	£6,943,645
Youth groups and activities	£506	£1,211	£1,627	£915	£36,887,847

Table 3A. Direct costs²³ of social action using National Churches Trust 2020 Survey data (Component 1)

^{23.} Calculated as: average monthly expenditure of churches doing this activity (NCT 2020 survey) * % of churches doing this activity (NCT 2020 survey) * 12 months in a year.

Table 3B. Replacement cost values of community social action imagining that the NHS or a third sector organisation would step in to replace the provision of churches (Component 2)

Type of Activity	Type of church	Unit	Unit quantity	Unit cost	Yearly value per church	UK-wide yearly value
	All	Hours of activity	12.91	£47	£607	£24,453,437
Drug/alcohol	Rural		1.54	£47	£72	
support	Suburban		17.46	£47	£820	
	Urban		30.79	£47	£1,447	
	All	Hours of activity	13.44	£37	£497	£20,046,110
Mental health	Rural		1.88	£37	£69	
support	Suburban		17.46	£37	£646	
	Urban		28.66	£37	£1,060	
Youth groups and activities	All	Participants in activity	259	£49.24	£12,753	£513,952,348
	All	Hours of activity	85.4	£6.78	£579	£23,347,216
Youth groups	Rural		31.5	£6.78	£214	
alternative 2	Suburban		125.3	£6.78	£850	
	Urban		153.9	£6.78	£1,044	
Food banks	All Food bank distribution centre		1,666	£27,350	£1,130	£45,551,425
Food banks alternative 2	All	Food parcel	2,091,673	£7.57	£393	£15,833,961

Table 3C. Replacement cost values of community social action imagining that the NHS or a third sector organisation would step in to replace the provision of churches – alternative with unit quantity inputs from National Churches Trust 2020 Survey data

Type of Community Activity	Type of church	Unit	Unit quantity	Unit cost	Yearly value per church	UK-wide yearly value
	All	Hours of activity	35.6	£47	£1,672	£67,369,349
Drug (alcohol support	Rural		13.2	£47	£619	
Drug/alcohol support	Suburban		51.3	£47	£2,413	
	Urban		77.5	£47	£3,644	
	All	Hours of activity	78.4	£37	£2,901	£116,908,801
Mental health support	Rural		28.7	£37	£1,061	
Mental health support	Suburban		61.5	£37	£2,276	
	Urban		199.8	£37	£7,393	
	All	Hours of activity	131.1	£6.78	£889	£35,827,985
Youth groups	Rural		84.7	£6.78	£574	
Youth groups	Suburban		183.7	£6.78	£1,246	
	Urban		200.0	£6.78	£1,356	
	All	Food parcel	1,035	£7.57	£7,833	£315,663,065
Food banks	Rural		273	£7.57	£2,068	
FUUU DANKS	Suburban		567	£7.57	£4,291	
	Urban		2,647	£7.57	£20,037	

Note that the different valuation sources produce different values, with a significant degree of variation. Below we present a summary of the yearly economic value of church social action in the four activities covered by this study, discarding the two methods which produce unusually large values for youth groups (from Table 3B) and food banks (from Table 3C respectively).

Table 3D. Summary of economic value of church community social action

Type of Community Activity	Direct costs	Replacement cost to society (Council, NHS, UK Govt)
Food banks	£53.6M	£15M – £45M
Mental health support	£26.9M	£20M – £116M
Drug/alcohol support	£6.9M	£24M – £67M
Youth groups and activities	£36.9M	£23M – £36M

Overall, these four activities alone amount to £124 million per year in direct costs and between £82 million and £265 million in terms of what it would cost another organisation or institution to replace the time and commitment of churches.

3. WAGE REPLACEMENT VALUE OF VOLUNTEERING

Introduction

Volunteering constitutes a significant part of the social benefits provided to the surrounding community. The scale and importance of volunteering is addressed by Knott (2014), who performs one of the first quantitative assessments of church volunteering in the UK²⁴. He estimates that 1.1 –1.4 million volunteers participated in church-based social action in the UK in 2014, with ca. 2,359 volunteer hours spent per church (up from 1,464 in 2010). Scaling this up UK-wide, he obtains 115 million volunteer hours per annum and over 50 million staff hours, which he evaluates at £13 per hour to obtain a monetary value of £2.388bn.

The Cinnamon Network, adopting a similar approach, valued volunteering from faith groups at £3bn per annum in 2016²⁵. This value was obtained by surveying 6,537 churches and other faith groups, with 3,007 responses accounting for about 8 million paid staff hours and 30 million volunteer hours. This was monetised with the actual wages paid to staff + living wage of £7.85 per hour for volunteers plus management costs, and finally scaled up to the total population of 60,761 faith groups.

Methodology

An estimate of the economic value of the volunteering that takes place in church buildings is derived through the wages these volunteers would have to be paid if they were replaced by paid workers. The National Churches Trust Survey provides an estimate of the hours performed by volunteers on various duties within the church, which we can then sum up to estimate a per-church average total volunteer hours per month, after which we multiply by the UK National Living Wage to get a per church replacement cost estimate of volunteering. Since the Living Wage is a minimum threshold for all wages paid in the UK, this is a conservative / lower bound estimate.

We estimate the average replacement cost of volunteering for rural, suburban and urban churches, and also a nationwide average that can then be scaled up to cover all 40,300 churches in the UK.

Note that there are a few details in which this method differs from the respective approaches of Knott (2014) and the Cinnamon Network (2016). Firstly, in this section we only consider volunteer hours and do not include staff hours or management overheads, as these are actually incurred financial costs that will already have been counted in Circle 1 (direct economic value). Secondly, unlike Knott (2014) but like the Cinnamon Network (2016), we value volunteer hours at living wage. While acknowledging that volunteers in churches often do specialist work, we prefer to err on the more conservative side. Finally, similarly to Knott (2014), we consider volunteering in or connected with a church, rather than the broader Cinnamon Network (2016) target population of 'faith groups'. The latter are likely to involve charities and other organisations which involve much more volunteer work than a church, whereas the main focus of this study remains centered around the church building and its community.

^{24.} https://jubilee-plus.org/docs/Report-National-Church-Social-Action-Survey-2014-Full.pdf

^{25.} http://www.cinnamonnetwork.co.uk/wp-content/uploads/2019/10/26081-National-Report-CFAAR-20pp-2016-AW_hr.pdf

Findings

Table 4. Replacement cost of volunteer hours by church type + total.

National Churches Trust 2010 Survey	Rural	Suburban	Urban	All
Total volunteer hours per month per church for all activities	67.09	150.79	170.87	113.68
Living wage	£8.21	£8.21	£8.21	£8.21
Total replacement cost of volunteers per church per year	£6,610	£14,856	£16,834	£11,200
Total replacement cost of volunteering in UK churches per year				£451,350,070
National Churches Trust 2020 Survey				
National Churches must 2020 Survey	Rural	Suburban	Urban	All
Total volunteer hours per month per church for all activities	Rural 108.48	Suburban 433.57	Urban 309.89	AII 213.97
Total volunteer hours per month				
Total volunteer hours per month per church for all activities	108.48	433.57	309.89	213.97

The National Churches Trust 2010 Survey estimates the average number of hours in a month spent by volunteers in a church building on various types of activity²⁶. Summing up by activity type, we get a total of 113.68 hours provided by volunteers in a month in the average church building in the UK. We assume that a cost equal to the National Living Wage (£8.21 since April 2019) per volunteer hour is the lower bound of the cost required to replace this input by paid staff, and therefore a conservative estimate of the market value of volunteering in churches. The resulting value is £11,200 per year per church or about £451 million per year UK-wide. Urban and suburban churches produce more value than rural churches because of the higher number of volunteers (and paid staff) involved.

The National Churches Trust 2020 Survey shows that the average total number of volunteer hours provided per church has grown to 214. This could be indicative and consistent with the underlying upward trend in church volunteer activity in the last decade, especially in urban and suburban churches, where it more than doubled. The corresponding wage replacement values are £21,080 per church or around £850 million per year UK-wide.

^{26.} https://docs.google.com/spreadsheets/d/1XIG_QL-px6Ajg1HBaT0K1nYcp4S3IT3DNsnhchWUeUA ('Volunteers' sheet, cells A56:E65)

4. NON-MARKET VALUE: THE WELLBEING VALUE OF VOLUNTEERING TO CHURCH VOLUNTEERS

Introduction

This report addresses not only the replacement costs of volunteering as in the studies quoted above, but also another aspect which has so far not been taken into account – the wellbeing benefits of volunteering to the volunteers themselves. This has been recognised as a convertible into monetary value in the latest edition of *The Green Book* (2018). This will be monetised using two subjective wellbeing valuation approaches as described further below.

We use the National Churches Trust 2010/2020 Survey data to estimate the number of volunteer hours to serve as the base for our valuation, as well as provide triangulation for the findings of Knott (2014). Alongside this we used previously conducted robust analysis of national UK data sets using panel data techniques that established the relationship between volunteering and wellbeing and monetised it using wellbeing valuation methods consistent with *The Green Book* (2018).

Methodology

We apply the previous findings in the Happy Days Paper (Gramatki, Lawton and Watt 2019), namely that volunteering is associated with an increase in an individual's wellbeing of 0.034 on a 1–7 scale. This is based on a robust panel data econometric study, which is the closest one has come to a causal estimate of the wellbeing benefit of volunteering. It can be used in combination with the Fujiwara (2013) three-stage valuation approach to produce a monetary value estimate of £911 per person per year. Alternatively we could apply the Frijters and Krekel (2021) WELLBY valuation approach based on NHS costs and the QALY equivalent, which provides a more conservative value of £142 per person per year and which we present as the main result.

The resulting yearly value per person can be applied in conjunction with the National Churches Trust Survey data on the number of volunteers in churches, multiplying by the monetary estimate to get a yearly wellbeing value of all volunteering in the average church in the UK. We split this analysis by three types of church location – rural, suburban and urban – but also produce an overall average value which we can scale to the total estimated number of churches in the UK (40,300) to produce a UK-wide wellbeing value. This is presented in Table 5.

In the National Churches Trust 2010 Survey we do not know the frequency or duration with which these people volunteer, but we assume that they are relatively regular volunteers and not just a one-off. This is based on an assumption that the church representative responsible for answering the survey was able to remember them when answering the question. This approach is supported by the relatively low volunteering frequency required to be defined as a regular volunteer in the Happy Days value – 'at least once in the last 12 months'.

In the National Churches Trust 2020 Survey data, however, we specifically asked the respondents how many of their church volunteers volunteered regularly (at least once a month). We can therefore use the number of regular volunteers as a more conservative estimate, as these people are more certain to have experienced the wellbeing benefits of volunteering due to their more regular exposure.

Findings

Table 5. Wellbeing value of volunteering by church type + total.

National Churches Trust 2010 Survey data	Rural	Suburban	Urban	All
Average volunteers per church	22.39	43.99	46.01	33.18
Valuation 1: Fujiwara (2013) method				
Yearly wellbeing value of volunteering per person	£911.00	£911.00	£911.00	£911.00
Wellbeing value of volunteering per church	£20,397	£40,075	£41,915	£30,227
Total wellbeing value of volunteering in UK churches				£1,218,147,294
Valuation 2: Frijters and Krekel (2021) method				
Yearly wellbeing value of volunteering per person	£142.00	£142.00	£142.00	£142.00
Wellbeing value of volunteering per church	£3,179	£6,247	£6,533	£4,712
Total wellbeing value of volunteering in UK churches				£189,875,868
National Churches Trust 2020 Survey data	Rural	Suburban	Urban	All
Average volunteers per church – all	28.24	42.96	63.35	39.59
Average volunteers per church – regular	16.65	34.08	51.64	28.86
Valuation 1: Fujiwara (2013) method				
Yearly wellbeing value of volunteering per person	£911.00	£911.00	£911.00	£911.00
Wellbeing value of volunteering per church (all)	£25,727	£39,137	£57,712	£36,066
Total wellbeing value of volunteering in UK churches (all)				£1,453,479,547
Wellbeing value of volunteering per church (regular)	£15,168	£31,047	£47,044	£26,291
Total wellbeing value of volunteering in UK churches (regular)				£1,059,545,838
Valuation 2: Frijters and Krekel (2021) method				
Yearly wellbeing value of volunteering per person	£142.00	£142.00	£142.00	£142.00
Wellbeing value of volunteering per church (all)	£4,010	£6,100	£8,996	£5,622
Total wellbeing value of volunteering in UK churches (all)				£226,557,734
Wellbeing value of volunteering per church (regular)	£2,364	£4,839	£7,333	£4,098
Total wellbeing value of volunteering in UK churches (regular)				£165,154,236

From the National Churches Trust 2010 Survey we estimate that the average number of volunteers in a church is 33, going up to 46 in urban churches and down to 22 in rural churches (people who volunteer in any capacity at the church, including members of the church Friends Group). Scaled up to the total estimated population of 40,300 church buildings in the UK, this means that about 1.34 million people volunteer in or through churches in the UK²⁷.

Applying the Frijters and Krekel (2021) wellbeing valuation estimate via NHS costs per QALY shows that volunteering generates an average of £4,712 per church building per year in social (wellbeing) value, up to £6,533 for urban churches and down to £3,179 for rural churches. Aggregating across all churches in the UK, we obtain a wellbeing value of £190 million per year. The alternative Fujiwara (2013) method produces values more than six times bigger.

^{27.} This figure aligns closely to Knott (2014) which states "The responses to the 3rd biennial National Church and Social Action Survey in 2014 indicate that 1.1 -1.4 million volunteers participated in church-based social action in the UK in 2014". https://jubilee-plus.org/docs/Report-National-Church-Social-Action-Survey-2014-Full.pdf

The 2020 edition of the National Churches Trust Survey shows that the average number of volunteers per church increased by about 20% since 2010 to 39.6 per church, and that about 75% of these are regular volunteers (who volunteer at least once a month). The proportion of regular volunteers is somewhat lower in rural churches. This would correspond to about 1.6 million church volunteers UK-wide, of which 1.16 million are regular volunteers. The wellbeing value using the more conservative method sits at £5,622 per church (£226 million UK-wide) if we consider all volunteers, or £4,098 per church (£165 million UK-wide) if we consider regular volunteers only.

There may be an alternative approach using just the national data (such as USoc) and circumventing the National Churches Trust Survey – we use the national data to establish the correlation between church attendance and volunteering, and then estimate a counterfactual reduction in the rate of volunteering of church attenders if they did not go to church, and finally monetise this reduction by using the Happy Days value or Frijters and Krekel (2021) valuation. The alternative approach is presented in Table 5B. While values for 2010 are very close to the direct calculation in Table 5, there is more of a discrepancy in the 2020 data because the falling trend in church attendance does not match the slightly increasing trend in volunteering.

Table 5B. Alternative derivation	via volunteerina induced l	by reaular church attendance

National Churches Trust 2010 Survey	Rural	Suburban	Urban	All
Average attendance per church – total	48.14	134.93	162.25	99.12
Increase in volunteering associated with once a week religious attendance for Christians (USoc regression)	0.311	0.261	0.261	0.272
Additional volunteers attributed to church attendance	14.97	35.22	42.35	26.96
Valuation 1: Fujiwara (2013) method				
Yearly wellbeing value of volunteering per person	£911.00	£911.00	£911.00	£911.00
Wellbeing value of volunteering per church	£13,639	£32,082	£38,578	£24,561
Total wellbeing value of volunteering in UK churches				£989,814,065
Valuation 2: Frijters and Krekel (2021)				
Yearly wellbeing value of volunteering per person	£142.00	£142.00	£142.00	£142.00
Wellbeing value of volunteering per church	£2,126	£5,001	£6,013	£3,828
Total wellbeing value of volunteering in UK churches				£154,284,958
National Churches Trust 2020 Survey	Rural	Suburban	Urban	All
National Churches Trust 2020 Survey Average attendance per church – total	Rural 32.27	Suburban 78.84	Urban 98.61	All 58.48
Average attendance per church – total Increase in volunteering associated with once a week	32.27	78.84	98.61	58.48
Average attendance per church – total Increase in volunteering associated with once a week religious attendance for Christians (USoc regression)	32.27 0.311	78.84 0.261	98.61 0.261	58.48 0.272
Average attendance per church – total Increase in volunteering associated with once a week religious attendance for Christians (USoc regression) Additional volunteers attributed to church attendance	32.27 0.311	78.84 0.261	98.61 0.261	58.48 0.272
Average attendance per church – total Increase in volunteering associated with once a week religious attendance for Christians (USoc regression) Additional volunteers attributed to church attendance Valuation 1: Fujiwara (2013) method	32.27 0.311 10.04	78.84 0.261 20.58	98.61 0.261 25.74	58.48 0.272 15.91
Average attendance per church – total Increase in volunteering associated with once a week religious attendance for Christians (USoc regression) Additional volunteers attributed to church attendance Valuation 1: Fujiwara (2013) method Yearly wellbeing value of volunteering per person	32.27 0.311 10.04 £911.00	78.84 0.261 20.58 £911.00	98.61 0.261 25.74 £911.00	58.48 0.272 15.91 £911.00
Average attendance per church – total Increase in volunteering associated with once a week religious attendance for Christians (USoc regression) Additional volunteers attributed to church attendance Valuation 1: Fujiwara (2013) method Yearly wellbeing value of volunteering per person Wellbeing value of volunteering per church	32.27 0.311 10.04 £911.00	78.84 0.261 20.58 £911.00	98.61 0.261 25.74 £911.00	58.48 0.272 15.91 £911.00 £14,491
Average attendance per church – total Increase in volunteering associated with once a week religious attendance for Christians (USoc regression) Additional volunteers attributed to church attendance Valuation 1: Fujiwara (2013) method Yearly wellbeing value of volunteering per person Wellbeing value of volunteering per church Total wellbeing value of volunteering in UK churches	32.27 0.311 10.04 £911.00	78.84 0.261 20.58 £911.00	98.61 0.261 25.74 £911.00	58.48 0.272 15.91 £911.00 £14,491
Average attendance per church – total Increase in volunteering associated with once a week religious attendance for Christians (USoc regression) Additional volunteers attributed to church attendance Valuation 1: Fujiwara (2013) method Yearly wellbeing value of volunteering per person Wellbeing value of volunteering per church Total wellbeing value of volunteering in UK churches Valuation 2: Frijters and Krekel (2021)	32.27 0.311 10.04 £911.00 £9,143	78.84 0.261 20.58 £911.00 £18,746	98.61 0.261 25.74 £911.00 £23,447	58.48 0.272 15.91 £911.00 £14,491 £583,982,309

In conclusion, there are many approaches and inputs that can be used to estimate the wellbeing value of volunteering in churches. The most conservative approach, considering regular volunteers only (who volunteer at least once a month), and using the Frijters and Krekel (2021) valuation approach based on NHS costs of production, produces a lower bound value of £165 million per year. More liberal models can result in estimates of up to £1.45 billion based on most recent (2020) volunteering data and *The Green Book* -consistent Fujiwara (2013) wellbeing valuation method.

5. NON-MARKET VALUE OF SOCIAL GOOD – THE WELLBEING VALUE TO BENEFICIARIES

Introduction

There is a range of benefits provided by the social good delivered at or with the help of a church or its congregation. Following the theory laid out in *The Green Book* (2018)²⁸ as mentioned in Appendix 1, they can be divided into:

- Primary (benefits to the individual, expressed as increases in individual wellbeing)
- Secondary (benefits to society, expressed as cost replacement of churches' provision or estimated savings to the government or other public institutions)

For this study we have tried to refer to the secondary benefits as market value / cost replacement and the primary values (individual wellbeing) as non-market / social value.

Previous studies that performed valuation of church community activities (Cnaan et al. 2013²⁹, Daly and Friesen 2016³⁰) often included a mix of the two, depending on the most readily available data. To the best of our knowledge, this study is the first to make a clear distinction and feature both of these complementary aspects in a comprehensive church valuation.

The market value to society / cost replacement was largely addressed in Circle 2, where the values represented costs which alternatively could have been incurred by the NHS, the state welfare/ benefits system, as well as the local councils and third sector (in the case of youth groups), had these activities not been provided in church buildings. Therefore, in the final circle we are left to address the wellbeing value that these activities represent to the individuals directly benefiting from them, similarly to the way we address church attendance in Circle 6 and volunteering in Circle 4. This represents a less tangible layer than the financial/economic values in Circles 1–3.

Methodology

Similarly to Circle 2, for each activity there are two key components that need to be estimated to get the aggregate social value: the unit value (wellbeing value per person per year) and unit quantity (number of people experiencing the outcome).

Unit value

For the community activities identified in Circle 2, we attempt to monetise the wellbeing benefits to participants in these activities by selecting an outcome that is likely to occur as a consequence of benefitting from the activity (e.g. drug/alcohol support reduces the number of drug and alcohol abusers) and applying the monetary value of that outcome. Some monetary values have been estimated in other studies and synthesised in various social value databases such as the HACT Social Value Bank (Trotter et al. 2014). We complement the HACT wellbeing values, which were obtained by using the Fujiwara (2013) three-stage wellbeing approach, by an alternative valuation using NHS costs per QALY and the WELLBY equivalence from Frijters and Kerkel (2021). To this end, we re-estimate the correlation between all four outcomes and life satisfaction using BHPS and, where possible, Understanding Society data, as follows:

For mental health problems as well as drug/alcohol problems, we use BHPS data to derive the subjective wellbeing correlation, as these outcomes in this exact form were not preserved in USoc.

^{28.} https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/685903/The_ Green_Book.pdf

^{29.} https://www.researchgate.net/publication/232942446_Valuing_the_Contribution_of_Urban_Religious_Congregations

^{30.} https://www.haloproject.ca/phase-1-toronto/

For youth groups, we use a subjective wellbeing correlation estimate of youth group participation in our recent work for prominent youth groups in the UK (Scouts and Girlguiding UK) using Understanding Society Youth data.

For food banks, the main outcome achieved is relief from (or at least partial mitigation of) food insecurity. As mentioned in the Trussell Trust's State of Hunger report (Sosenko et al. 2019), existing nationally representative data sets do not adequately cover food insecurity³¹. The closest indicator of food insecurity we could find is a question in the USoc data introduced by the Department for Work and Pensions – 'Do you eat at least one filling meal a day?' – asked only of people of pensionable age. By performing wellbeing valuation of this indicator, we are making the assumption that the wellbeing correlation with food insecurity for pensioners can be extrapolated to people of other ages (which need not be true, but is a fallback option for lack of better available data).

There are other socially desirable outcomes that may be brought about by food bank activity – more general relief from debt / financial problems, better access to education for children and young people etc. None of these are as direct as tackling food insecurity, but they are nonetheless valid topics of interest for future research.

Unit quantity

The wellbeing values mentioned above, regardless of the valuation method used, are measured in terms of pounds per person per year. To scale them up to a church or nationwide level, we need to know the number of people that experienced the positive outcome over the course of a year.

Prior to the National Churches Trust 2020 Survey, it was quite difficult to obtain relevant information. Indirectly one can combine several sources of data in an attempt to arrive at the desired target. Knott (2014) contains an estimate of the number of people benefitting from various forms of social action at an average church level. However, not every participant in a mental health counselling session will have his/her problems treated – and therefore we need to assume a success rate. This step is the hardest to ground in empirical evidence. Finally, as before in Circle 2, the proportion of churches involved in the activity (e.g. mental health counselling) needs to be applied to 'spread out' the figure, which so far pertains only to churches performing the activity, to all churches in the UK.

The National Churches Trust 2020 Survey contains a dedicated question asking the respondents to estimate the number of successful recoveries from mental health and drug/alcohol problems, as well as regular participants in youth groups. It would be possible to use these numbers directly, but a comparison of these figures and the total number of participants raises the concern that the respondents, not being health specialists, tend to overstate the success rate. We therefore apply further adjustments of 40-60% for optimism bias. The proportion of churches involved is factored in as before.

^{31.} It is also mentioned in the State of Hunger report that Trussell Trust representatives managed to convince the data collectors to include a Household Food Insecurity Module in future editions of the Family Resources Survey, so more reliable data should become available from 2021 onwards. Furthermore, there is a food insecurity question in the youth questionnaire of Understanding Society in Wave 11 (2019-20), where fieldwork is currently ongoing

Findings

Type of Activity	Resulting outcome	correlation	Updated Value of outcome - Fujiwara (2013)		HACT (2014) value based on Fujiwara (2013)
Counseling / mental health support	People successfully recovering from anxiety, depression or other mental health problems	0.691	£14,568	£2,881	£36,766
Drug/alcohol support	People successfully recovering from drug/ alcohol dependency	0.281	£7,040	£1,171	£26,124
Youth groups and activities for young people	People experiencing a wellbeing increase from youth group participation	0.108	£2,919	£450	£2,300
Food banks	People experiencing relief from food insecurity	0.324	£7,966	£1,350	_

Table 6B. Outcome unit quantities (number of people experiencing outcome per year) – Knott (2014) + National Churches Trust 2010 Survey

Type of Activity	Resulting outcome	Number of beneficiaries per church per year – Knott (2014)	Success rate – assumption	% of churches doing this	Final outcome quantity – people per year
Counseling / mental health support	People successfully recovering from anxiety, depression or other mental health problems	333	20%	9.6%	6.4
Drug/alcohol support	People successfully recovering from drug/alcohol dependency	87	20%	8.6%	1.5
Youth groups and activities for young people	People experiencing a wellbeing increase from youth group participation	259	50%	32.2%	41.7
Food banks	People experiencing relief from food insecurity	830	40%	66%	219.1

Table 6C. Outcome unit quantities (number of people experiencing outcome per year) – National Churches Trust 2020 Survey

Type of Activity	Type of church	Number of successful outcomes per church per year	Optimism bias correction	% of churches doing this	Final outcome quantity – people per year	Number of beneficiaries per church per year	Average success rate
	All	63.9	40%	29.0%	7.4	126.7	50.4%
Counseling	Rural	40.8	40%	20.6%	3.4	128.3	31.8%
/ mental health	Suburban	24.1	40%	39.1%	3.8	47.6	50.6%
	Urban	108.6	40%	41.5%	18.0	170.6	63.6%
	All	32.8	60%	10.4%	2.0	115.2	28.5%
Drug/alcohol	Rural	29.0	60%	2.7%	0.5	84.4	34.4%
support	Suburban	12.3	60%	13.9%	1.0	40.8	30.2%
	Urban	41.3	60%	25.4%	6.3	142.8	28.9%
	All	44.8	100%	42.4%	19.0	115.8	38.7%
Youth groups	Rural	32.7	100%	28.6%	9.4	140.2	23.4%
/ activities	Suburban	53.2	100%	66.2%	35.2	88.0	60.4%
	Urban	52.3	100%	57.6%	30.1	107.6	48.6%
	All	560.3	40%	58.0%	130.0		
	Rural	475.7	40%	44.7%	85.1		
Food banks	Suburban	315.3	40%	75.0%	94.6		
	Urban	773.2	40%	76.7%	237.2		

Notes on optimism bias:

- For counselling/mental health support, the average success rate (i.e. ratio of people who recover from depression, anxiety or other mental health problems to total participants in the mental health support activities over one year) estimated by National Churches Trust 2020 Survey respondents is around 50%. We believe that this is an overstatement because the respondents are not clinicians who can accurately assess recovery from a mental health condition and therefore apply a further optimism bias adjustment of 40% to target a true success rate of around 20%.
- For drug/alcohol support, the average reported success rate is 28.5%. This may be an overstatement because the church respondents might not track the recovered addicts to identify potential cases of relapse. We therefore apply a further optimism bias adjustment of 60%.
- For youth groups and activities, the number of successful outcomes indicates the number of young people participating regularly (at least one a month), representing on average 38.7% of all youth participants. There is no expected difficulty in identifying a regular youth group participant and less possibility of overstatement, therefore optimism bias adjustments are not applied.
- For food banks, successful outcomes represent people experiencing relief from food insecurity. However, food bank users are not normally asked whether they are starving or food insecure due to the sensitive nature of the question and potential for acquiescence bias. Therefore we believed it would not be meaningful to ask the respondent to estimate the number of successful outcomes and only asked about the total number of food bank beneficiaries. We apply a success rate estimate of 40% (that is, assuming that 40% of food bank users are actually facing significant food insecurity that their food bank visit helps them alleviate).

Following fruitful peer review feedback, we add a few clarifications regarding the optimism bias adjustment. This is, of course, a key assumption upon which the final result depends, and is also the one least grounded in empirical evidence. The optimism bias correction parameter affects the final value linearly – thus increasing optimism bias by 10% (e.g. from 40% to 44%) would result in an increase of the unit quantity by 10%. This can be used to perform sensitivity analysis of the findings (available upon request).

We select the National Churches Trust 2020 Survey as the best source of unit quantities, given that they originate from more direct questions, and combine them with the Frijters-based and Fujiwarabased wellbeing valuations below to provide respectively a main value and an upper bound value to individuals of church social action:

Type of Activity	Type of church	Value per outcome – Fujiwara (2013)	Value per church per year	UK-wide value	Value per outcome – Frijters and Krekel (2021)	Value per church per year	UK-wide value
	All	£14,568	£107,899	£4,348M	£2,881	£21,338	£859M
Counselling /	Rural	£14,568	£48,952		£2,881	£9,681	
mental health	Suburban	£14,568	£54,819		£2,881	£10,841	
	Urban	£14,568	£262,529		£2,881	£51,918	
	All	£7,040	£14,396	£580M	£1,171	£2,395	£96M
Drug/alcohol	Rural	£7,040	£3,307		£1,171	£550	
support	Suburban	£7,040	£7,222		£1,171	£1,201	
	Urban	£7,040	£44,343		£1,171	£7,376	
	All	£2,919	£55,447	£2,234M	£450	£8,548	£344M
Youth groups /	Rural	£2,919	£27,332		£450	£4,214	
activities	Suburban	£2,919	£102,706		£450	£15,833	
	Urban	£2,919	£87,867		£450	£13,546	
	All	£7,966	£1,035,460	£41,729M	£1,350	£175,480	£7,071M
	Rural	£7,966	£677,578		£1,350	£114,829	
Food banks	Suburban	£7,966	£753,528		£1,350	£127,701	
	Urban	£7,966	£1,889,554		£1,350	£320,223	

Table 7. Wellbeing value to individuals benefiting from church social action

We can see that food banks are by far the most impactful church-supported social activity in terms of its contribution to the welfare of individuals, amounting to between £7 and £42 billion per year depending on the valuation approach. This value does not derive from food bank provision being more valuable to the individual beneficiary than mental health or drug and alcohol support. Rather it is the scale of churches' commitment in terms of people reached and hours devoted to this cause in the last 10 years.

The upper bound value is more than the value of all cars exported from the UK to the rest of the world in 2018 (ca. £33 billion)³². The remaining three social activities considered in this study have a combined wellbeing value between £1.3 and £7 billion per year.

^{32.} https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/ file/791972/190402_UK_Trade_in_Numbers_full_web_version.pdf

6. WELLBEING VALUE OF CHURCH ATTENDANCE

Introduction

People who attend church feel happier on average than those who do not. This can be due to mental health benefits from the teachings of the faith, or to the social support from interacting with fellow church members, as well as to a sense of belonging to the congregation which provides fulfilment.

To the best of our knowledge, this study is the first to address this issue and attempt to monetise the increased levels of wellbeing of church attenders. More details on how we do this and how we ensure the validity of our results are described below. Besides subjective wellbeing, we also investigate the relationship between religious attendance and other desirable measures that correspond to other outcomes outlined in the DCMS Sporting Future strategy: physical well-being, individual development and social/community development (including loneliness). We use the DCMS measures as suitable here in the absence of a consistent framework from the government to measure the impact of church buildings.

Methodology

This report analyses a large nationally representative UK survey – the Understanding Society household panel dataset (USoc)³³ to focus on the relationship between several measures of religious participation (regular attendance at a religious service, religious belief, importance of religion in life, membership of a church group) and the impact on various indicators of the DCMS five outcomes – life satisfaction, self-reported general health, trust in others, resilience (ability to achieve goals), friendships, and volunteering.

The impact is analysed using robust econometric methodology (multivariate OLS regression and where possible fixed effects regressions exploiting the panel component of the data) that can control for the fact that the higher levels of the outcome for church attenders are due to demographic differences (e.g. being richer, more educated, upper class). This is accounted for by including the rich amount of demographic information available in USoc as control variables in the regression equation (described in Appendix 2).

While we analyse several outcomes to paint a general picture of the intangible / non-financial benefits of religious participation to individuals, the main outcome we focus on is 'satisfaction with life overall' (life satisfaction for short)³⁴. This is the outcome for which there is the most abundant literature developing robust valuation techniques³⁵. Likewise, the main indicator of religious participation for valuation purposes is 'regular attendance at religious services', which is a more active and therefore more impactful form of participation than religious belief (consistent with the findings of Spencer et al. 2016).

The resulting estimate of the wellbeing benefit of church attendance can be monetised by several wellbeing valuation approaches, endorsed by the latest edition of *The Green Book* (2018). One of these is Fujiwara's three-stage wellbeing approach. The main idea behind the three-stage approach is to use the results of a previous study deriving a robust causal estimate of the life satisfaction effect of income (Fujiwara 2013 used an instrumental variable approach with lottery wins data in the nationally representative BHPS³⁶ data). This causal estimate of the income effect on life satisfaction is compared with the estimate of the effect of church attendance on life satisfaction (mentioned above), working out an income equivalent that would be required to offset the wellbeing increase. This represents the individual's average hypothetical 'willingness to pay to experience the wellbeing benefits of church attendance' and is the estimated wellbeing value.

^{33.} Waves 1-7, sample size 334,900. However, most variables on religious participation were only available in some waves: church attendance in waves 1 and 4 (wellbeing regression sample size 77,500), membership of church groups in waves 3 and 6 (wellbeing regression sample size 74,600)

^{34.} Life satisfaction in the USoc dataset is measured on a scale from 1 (completely dissatisfied) to 7 (completely satisfied).

^{35.} See Frijters and Krekel 2021, for example, where an increase of 1 point in life satisfaction on a 0-10 scale for one person over one year is named a Wellbeing-Adjusted Life Year (WELLBY) and monetised using a range of costing methods.

^{36.} The British Household Panel Survey (1991-2008) was the precursor dataset to Understanding Society.

There are also other more direct, cost-based approaches to valuing life satisfaction increases, richly illustrated by Frijters and Krekel (2021). Most of these use as a reference point the costs of various public interventions and divide them by the aggregate life satisfaction increases they were estimated to bring about – for example, if intervention A helped 1,000 people experience a life satisfaction of 0.5 on a scale of 0 to 10 over the course of one year, then its aggregate effect is 500 WELLBY, and if the intervention cost was, say, £1 million, this would imply a valuation of £2000 per WELLBY (i.e. giving a life satisfaction increase of 1 on a 0-10 scale has a social value of £2000 per person per year).

The main costing recommended for use by these authors originates from the NHS costs for 1 QALY – an extra year of life spent in perfect health – valued by the NHS at £15,000. This is combined with results from stated preference studies that the life satisfaction level which makes people indifferent to living and not living an extra year – corresponding to 0 QALY – is 2 on a scale of 0 to 10. Given that the average life satisfaction score of UK respondents in national surveys that use the 0-10 scale is close to 8, Frijters and Krekel (2021) conclude that the 0 to 1 QALY interval corresponds to a change in 6 WELLBY (8-2), and under the (arguable) assumption of linear value of wellbeing, this implies a valuation of £2,500 per WELLBY, which we present as our main valuation approach.

As a final caveat, it is worth mentioning that multivariate OLS regression is not sufficient to prove causality. It could be that there are some factors unobserved in the data that are responsible for regular church attenders being happier to begin with. More robust econometric methodology exists that uses panel data to further cancel out bias from time-invariant unobservable factors³⁷, such as the setup used in the panel data analysis of the wellbeing benefits of volunteering (Lawton et al. 2020). A similar study of church attendance is an interesting topic for future research.

Findings

Appendix 2 lists some details about key variables used in the analysis – the questions behind them in the USoc data, answer scales and details about the regression models used.

We start by presenting OLS regression associations between indicators of church involvement / religious participation and variables related to the DCMS five outcomes in the Understanding Society data³⁸ in Table 8 below. The interpretation of the numbers is as follows.

- Being religious is associated (all included demographic factors equal) with a 0.027 higher average life satisfaction on a scale of 1 to 7, compared to those who are not religious.
- Regularly attending religious services (once a week or more), in turn, is associated with a much higher increase in life satisfaction 0.136 on the 1-7 scale.

We can see that frequent religious attendance is also positively associated with other relevant outcomes – higher levels of trust in people (+0.104 on a 3-point scale, equivalent to 5.2% of the population moving from the lowest end – 'can't be too careful in dealing with people' to the highest end – 'most people can be trusted'), a 23 percentage point higher likelihood of having volunteered in the last 12 months, a 0.197 point uplift in general health (1 point being the difference between 'fair' and 'good' or 'good' and 'very good'), and a 0.559 increase in mental health as measured by the 12-item General Health Questionnaire (GHQ) index ranging from 0 to 36.

To put this into context, we can add that the wellbeing (life satisfaction) increase associated with attending church once a week or more (0.136) is comparable to owning one's house outright as opposed to renting (0.163), living in the North East as opposed to London (0.136), and around half the benefits of being married (0.286) as opposed to being single.

^{37.} But even these do not guarantee causality, compared to a randomised experiment setting.

^{38.} Outcome variables treated as cardinal. See Kristoffersen (2017) for details.

The association with trust (0.104) is comparable to living in a rural area as opposed to an urban area (0.093), while the general health correlation (0.197) is comparable to having a university degree as opposed to A levels or equivalent (0.210). Note that not all outcomes could be correlated with religious participation because some were not collected in the same waves of the survey.

Regarding the comparison across different measures of religious involvement, we can see that frequent religious attendance (once a week or more) is the strongest predictor of not only life satisfaction but also general health, mental health, trust (at the same level with 'religion making a great difference in life') and volunteering (at the same level as being a member of, or active in, a church group).

Table 8. USoc Regression results

Outcome variable (right) / Key explanatory variable (down)	Life satisfaction (1 to 7)	Can achieve goals (1 to 4)	Trust in general r (1 to 3)	Trust in heighbours (1 to 5)	Volunteering (0/1)	Can rely on friends (1 to 4)	General health (1 to 5)	Mental health (0 to 36)
Respondent is Religious (ref= not religious)	0.027***	0.012*	0.013	0.053***	0.063***	0.031***	0.037***	-0.024
Frequency of religious attendance (at religious services)								
once a week or more	0.136***		0.104***		0.230***		0.197***	0.559***
less often but at least once a month	0.067***		0.042**		0.133***		0.117***	0.030
less often but at least once a year	0.062***		0.041***		0.087***		0.107***	0.037
only at weddings, funerals etc.	0.054***		-0.046***		-0.005		0.042***	0.179***
never or practically never				reference	group			
Importance of religion in life								
no difference (reference group)	0.000		0.000		0.000		0.000	0.000
a little difference	-0.024*		0.031**		0.031***		-0.011	-0.463***
some difference	-0.026*		0.050***		0.077***		0.033***	-0.433***
a great difference	0.047***		0.105***		0.178***		0.069***	-0.190***
Member of a church or religious group (ref. = not a member)	0.081***			0.035***	0.253***		0.082***	0.260***
Active in a church or religious group (ref. = not active)	0.082***			0.041***	0.226***		0.081***	0.258***

Stars indicate statistical significance: *p<0.1, **p<0.05, ***p<0.01

Note that to test whether the positive and significant wellbeing associations with religious services attendance might be due in part to religious belief, we also ran a model controlling for religious belief in the regression. As a result, the coefficient of religious services attendance was largely unchanged while the coefficient of being religious in this combined model is not significant (results available on request). This gives more evidence that the positive relationship is actually associated with attendance (community experience) and not just faith/belief in itself (individual experience).

To proceed towards wellbeing valuation, we will focus on attendance at religious services once a week or more as the measure we value. This is because this study is centred around the church building, and attendance at religious services can be most closely connected to use of the church building and services provided therein, but also because religious services attendance shows the strongest impact out of all religious involvement variables, as mentioned above.

Because the focus of this study is churches, we disaggregate the regression analysis of regular religious attendance by the respondent's religion and further use the coefficient and wellbeing value for Christians. We also disaggregate this by rural and urban areas of residence. The wellbeing valuation figures (based on Understanding Society data) are presented in Table 9 below.

Measure	Life satisfaction coefficient	Value per person per year – Fujiwara three stage WV	Value per person per year – Frijters and Krekel (2021) Wellby (NHS-QALY-based)
Religious attendance once a week or more:			
Full sample	0.136***	£3,630	£567
Christian	0.145***	£3,855	£604
Christian in urban area	0.151***	£4,004	£629
Christian in rural area	0.121***	£3,252	£504
Less frequent attendance:			
less often but at least once a month	0.067***	£1,845	£279
less often but at least once a year	0.062***	£1,711	£258
Other involvement:			
Being religious	0.027***	£757	£113
Active in a church or religious group	0.082***	£2,242	£342

Table 9. Wellbeing valuation of church attendance and other religious involvement

Stars indicate statistical significance: *p<0.1, **p<0.05, ***p<0.01

We can see that Christians enjoy a slightly higher benefit from religious service attendance than the average respondent, but also it is worth noting that the data shows that there are benefits to attending any place of worship, of any faith, on a regular basis (coefficients for other faiths omitted for brevity).

Finally, we combine the wellbeing values for religious attendance of Christians (overall as well as in rural/urban areas) with attendance data from the National Churches Trust 2010 and 2020 Surveys to derive wellbeing values per church per year, as well as a UK-wide aggregate, presented in Table 10.

Table 10. Wellbeing	value of church attendance	39 by church type + total.

National Churches Trust 2010 Survey	Rural	Suburban	Urban	All
Average attendance per church – adults	41.97	107.37	135.44	81.88
Average attendance per church – children	6.17	27.56	26.81	17.24
Average attendance per church – total	48.14	134.93	162.25	99.12
Valuation 1: Fujiwara (2013) method				
Yearly wellbeing value of attendance per person	£3,252	£4,004	£4,004	£3,855
Wellbeing value of attendance per church	£156,551	£540,260	£649,649	£382,108
Total wellbeing value of attendance in UK churches				£15,398,936,280
Valuation 2: Frijters and Krekel (2021) WELLBY (NHS-QALY)				
Yearly wellbeing value of attendance per person	£504	£629	£629	£604
Wellbeing value of attendance per church	£24,263	£84,871	£102,055	£59,868
Total wellbeing value of attendance in UK churches				£2,412,699,744
National Churches Trust 2020 Survey	Rural	Suburban	Urban	All
Average attendance per church – adults	27.81	68.85	83.79	49.6
Average attendance per church – children	3.59	10.96	15.13	8.01
Average attendance per church – children Average attendance per church – total	3.59 32.27	10.96 78.84	15.13 98.61	8.01 58.48
Average attendance per church – total				
Average attendance per church – total Valuation 1: Fujiwara (2013) method	32.27	78.84	98.61	58.48
Average attendance per church – total Valuation 1: Fujiwara (2013) method Yearly wellbeing value of attendance per person	32.27 £3,252	78.84 £4,004	98.61 £4,004	58.48 £3,855
Average attendance per church – total Valuation 1: Fujiwara (2013) method Yearly wellbeing value of attendance per person Wellbeing value of attendance per church	32.27 £3,252	78.84 £4,004	98.61 £4,004	58.48 £3,855 £225,440
Average attendance per church – total Valuation 1: Fujiwara (2013) method Yearly wellbeing value of attendance per person Wellbeing value of attendance per church Total wellbeing value of attendance in UK churches	32.27 £3,252	78.84 £4,004	98.61 £4,004	58.48 £3,855 £225,440
Average attendance per church – total Valuation 1: Fujiwara (2013) method Yearly wellbeing value of attendance per person Wellbeing value of attendance per church Total wellbeing value of attendance in UK churches Valuation 2: Frijters and Krekel (2021) WELLBY (NHS-QALY)	32.27 £3,252 £104,942	78.84 £4,004 £315,675	98.61 £4,004 £394,834	58.48 £3,855 £225,440 £9,085,248,120

There are two main points to take away from this. The first trend one can see is a rather strong reduction in church attendance over time, which confirms the observations in the literature about a contemporary decline in religious belief and involvement (Spencer 2016). Between 2010 and 2020, churches lost more than a third of their attendees on average, with urban and suburban churches particularly hit. This is not the case with all churches as some have seen increased attendance.

Secondly, we have to acknowledge that wellbeing value contains a considerable degree of uncertainty and the monetary value is strongly dependent on the valuation method. Using 2020 attendance figures, the nationwide monetary wellbeing value of weekly church attendance in the UK may lie between £1.4 and £9.1 billion depending on the wellbeing valuation method used (Frijters and Krekel or Fujiwara wellbeing method respectively). We present the lower-end, more conservative value, as the main result.

^{39.} Attendance figures are for typical weekly attendance at a Sunday service. This is an imperfect proxy for the number of people attending the church once a week or more, because on the one hand, it is not always the same people attending, but on the other hand, people may also be attending other services during the week. We make the assumption that these two upward and downward errors cancel each other and use the figure as an estimate of the number of people attending church regularly. This is preferable to using estimated proportions of church attendance from national surveys because people tend to overstate church attendance when self-reporting.

SUMMARY OF VALUES AND CONCLUSION

The tables below summarise all the categories of economic and social value generated by church buildings as identified by this study. The most conservative value is presented for each instance where multiple valuation methods have been applied.

Table 11A. Summary of the economic and social value of church buildings – UK-wide

All values in £million

Value category	Direct economic value	Cost replacement	Social (wellbeing) value	All
Church economic activity	1,386			1,386
Church attendance			1,423	1,423
Volunteering		850	165	1,015
Social and community good:				
Food banks	54	15	7,071	7,140
Mental health support	27	20	859	906
Drug/alcohol support	7	24	96	127
Youth groups and activities	37	23	344	404
TOTAL	1,511	932	9958	12,401

Table 11B. Summary of the economic and social value of church buildings – average per church

Value category	Direct economic value	Cost replacement	Social (wellbeing) value	All
Church economic activity	£34,389			£34,389
Church attendance			£35,322	£35,322
Volunteering		£21,080	£4,098	£25,178
Social and community good:				£0
Food banks	£1,330	£393	£175,480	£177,203
Mental health support	£667	£497	£21,338	£22,502
Drug/alcohol support	£172	£607	£2,395	£3,174
Youth groups and activities	£915	£579	£8,548	£10,042
TOTAL	£37,473	£23,156	£247,181	£307,810

The total economic and social value of church buildings in the UK calculated so far is at least £12.4 billion per year (roughly equal to the total NHS spending on mental health in 2018)⁴⁰, but can be as high as an upper bound estimate of £62.8 billion (almost equal to the volume of yearly trade between the UK and China in 2018)⁴¹ if alternative valuation methods are used. The value of an average church building in the UK is over £300 thousand per year (up to £1.5 million with alternative methods), roughly around the level of the yearly turnover of a micro-enterprise with 1-9 employees⁴².

^{40.} https://www.england.nhs.uk/publication/nhs-mental-health-dashboard/

^{41.} https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/

file/868378/200227_UK_trade_in_Numbers_full_web_version_final.pdf

^{42.} https://www.merchantsavvy.co.uk/uk-sme-data-stats-charts/

Rural churches and churches in deprived communities

We can see throughout this report how urban churches generate more value than rural churches. For convenience, this is summarised in Table 12 below. Looking in more detail at all the models we used to calculate value, we can hypothesise that the main reason for this is that urban churches on average serve larger communities of people. This can explain the higher attendance, more volunteers, bigger expenditures and more participants in the community and social good activities in urban churches. At the end of table 12 we can see that if we express the total value in 'per church attendee' terms, rural churches are almost the same as urban churches, with only suburban churches trailing behind.

Value category	Rural	Suburban	Urban	All
Church economic activity	£19,563	£45,277	£61,786	£34,389
Social good – direct market value:				
Food banks	£71	£403	£4,881	£1,330
Mental health support	£286	£283	£1,798	£667
Drug/alcohol support	£22	£57	£601	£172
Youth groups and activities	£506	£1,211	£1,627	£915
Social good – replacement cost:				
Food banks	£393	£393	£393	£393
Mental health support	£69	£646	£1,060	£497
Drug/alcohol support	£72	£820	£1,447	£607
Youth groups and activities	£214	£850	£1,044	£579
Volunteering – replacement cost	£10,687	£42,715	£30,530	£21,080
Volunteering – wellbeing value	£2,364	£4,839	£7,333	£4,098
Social good – wellbeing value:				
Food banks	£114,829	£127,701	£320,223	£175,480
Mental health support	£9,681	£10,841	£51,918	£21,338
Drug/alcohol support	£550	£1,201	£7,376	£2,395
Youth groups and activities	£4,214	£15,833	£13,546	£8,548
Wellbeing value of regular attendance	£16,264	£49,590	£62,026	£35,322
Total per church	£179,785	£302,662	£567,589	£307,811
Average attendance per church	32.3	78.8	98.6	58.5
Average value per attendee	£5,571	£3,839	£5,756	£5,264
Share of all churches – National Churches Trust 2020	56.3%	17.9%	25.8%	100.0%
Share of all churches – CBC report	57.3%	30.6%	12.1%	100.0%
Weighted average with CBC weights applied				£264,284

Table 12. Summary economic and social value per church, rural vs. urban

To address the concern that there has been some oversampling of urban churches in the National Churches Trust 2020 Survey, we consulted a Church Buildings Council report⁴³ that shows an England-wide breakdown between rural, suburban and urban churches. (This covers the Church of England only.) The resulting proportions of rural, suburban and urban churches are applied as weighting factors to derive an alternative weighted average, which is about 86% of the original value.

However, another potentially important factor may be that urban churches are located in more deprived communities (see supporting evidence in Table 13) where people are more in need or reliant on the church to provide community and social good.

	Rural	Suburban	Urban	All
Avg. Index of Multiple Deprivation decile (1 = most deprived, 10 = least deprived)	6.68	6.67	4.21	6.00
% High deprivation (deciles 1-3)	2.4%	13.0%	47.0%	16.5%
% Medium deprivation (deciles 4-7)	66.1%	41.0%	42.6%	55.2%
% Low deprivation (deciles 8-10)	31.5%	46.0%	10.4%	28.3%
	High deprivation	Medium deprivation	Low deprivation	All
% Rural	High deprivation			All 54.8%
% Rural % Suburban		deprivation	deprivation	

Table 13. Statistics on local area deprivation and rural/urban status, National Churches Trust 2020 Survey

This can explain the higher proportion of urban churches involved in most social good activities. The natural consequence is that churches in high deprivation areas generate more value, and when we further consider that some of the financial values could also benefit from distributional weighting as the benefits target low-income groups, we can see that churches provide a wide range of benefits to those groups of the populations that are most in need of them.

It is important to keep in mind that the findings should not be interpreted as downplaying the roles of rural churches. It is rather that the communities of these churches are different – more sparsely populated firstly, and secondly facing a different range of needs. As we could see, some community and social good activities are more prominent in rural areas, and the nature of these matches the common perception of a rural lifestyle: bell-ringing, flower shops, farmers' markets, and the doubling as a local library/post office. Villages tend to provide a support network for residents who consequently have less need of the more formally organised activities provided in urban and suburban churches. Furthermore one needs to acknowledge the higher heritage value of rural churches (75% of these are listed according to the CBC report), a category that was beyond the scope of this study but a very interesting topic for follow-up research.

Cost-benefit analysis

Finally, and somewhat beyond the scope of this report, we can start to look at a very crude cost / benefit value of church buildings.

With the total economic and social value of a church building being estimated at no less than £307,810, comparing that to the raw yearly church expenditure average of £82,406 (National Churches Trust 2020 Survey) will yield a net benefit of a church of at least £225,000 and an average benefit-to-cost ratio (also known as SROI) of a church of 3.74.

This report has, at almost every stage, used the most conservative estimates and only accounts for four of the social care activities provided by churches. In addition, no multiplication for distributional impacts are applied but this would almost certainly be relevant.

There can be no doubt that church buildings are providing a hugely cost effective distribution network of social good and wellbeing in the UK. The values here are enormous; the social good provided is to those most in need. We welcome any challenge to these findings but at the same time suggest that the challenge is rather to establish the full value in addition to and beyond these findings. The House of Good, made up of the UK's church buildings and the social good that takes place in them, is worth far more to the economy and society than we have been able to capture in this pioneering examination at the subject.

APPENDIX 1. LITERATURE REVIEW

Though a number of church buildings are in poor repair and others lack essential facilities, they remain important buildings for local people. A review commissioned by DCMS acknowledges that the number of government-funded initiatives to support the maintenance and repair of church buildings is dwindling, and providing for the needs and expenditure of each church falls increasingly – and by now overwhelmingly – into the hands of its local community of worshippers (Taylor 2017). This is coupled with significant increases in the proportion of people who identify as non-religious and of those who do not believe in God, along with a less pronounced but ongoing decrease in church attendance (Spencer 2016).

In order to make a case for sustained maintenance and support of church buildings, it is important to acknowledge and assess the benefits they bring to society. Several studies described the extent to which churches are involved in social action – organising or helping to organise a range of activities directed at people in need from the wider community (Church Urban Fund 2015; Knott 2014). Repeating these surveys over time shows a strong increasing trend in the community activities organised by churches (also summarised in Spencer 2016).

While some studies stop at identifying the types of community activities and proportion of churches involved (Church Urban Fund 2015), other studies go further by trying to measure the quantity of such activities (e.g. the ECORYS 2014 study of English cathedrals). There are some initial efforts to assign monetary values to these activities, which is particularly useful to advance the case for church funding. Knott (2014) applies a cost-based method using the data collected on the expenses incurred by churches to organise these activities, as well as the number of volunteer hours involved, priced at a national average wage.

On the other hand, a group of studies in North America is piloting another approach which is based on the social outcomes achieved by religious congregations through their activities (Cnaan et al. 2013 in Philadelphia, extended by Cnaan and Partners for Sacred Places 2016 to three US cities, and by Daly 2016 to Toronto). Examples of such outcomes are education (from nurseries/daycares or alternative schools held at the church), suicide prevention, employment, crime prevention, recovery from drug/alcohol abuse, promoting civic engagement etc. Valuations for these outcomes are inferred by invoking national statistics and unit cost databases concerning the respective outcomes. Attempts to estimate national aggregates for the USA, based on the Cnaan et al. (2013) finding, were undertaken by Grim and Grim (2016), although some components included by Grim and Grim in the national value aggregates (such as the value added of businesses that are known to have religious roots, or the income earned by households that identify as religious) are of questionable validity because they cannot be directly attributed to religious belief or church attendance.

Volunteering is another key component of church social action and has been valued in the UK in the National Church Social Action Survey (Knott 2014) and also by the Cinnamon Network (2016), which estimated the value of volunteering at £3bn nationally based on detailed audits of 87 communities, although the scope of this study stretched beyond churches and included all faith-based organisations (particularly charities).

Furthermore, multiple studies acknowledged the direct impact of churches' economic activity – their annual operating expenditure. This is the case in the ECORYS (2014) report on English cathedrals, which also takes into account multiplier effects and correction factors for deadweighting and leakage. Direct expenditure is also counted in the North American valuation studies by Cnaan et al. (2013), Partners for Sacred Places (2016), Daly (2016) and Grim and Grim (2016).

One can conclude that research into the monetary valuation of the benefits of church buildings to society is still in its infancy – studies tackling this subject are scarce and lack a unique methodology to determine which components should or should not be valued, and what the most appropriate valuation method for each component should be. We attempt to fill in this gap by undertaking a comprehensive valuation study of churches in the UK, covering all the economic and social value components mentioned so far, and supplementing them with a very important component not

tackled yet in the literature – the individual wellbeing benefits to the people attending church services and volunteering with the church, using wellbeing valuation techniques endorsed by *The Green Book* (2018).

A welfare and wellbeing approach to economic value in line with The Green Book (2018)

The approach we take in this report is in line with HM Treasury principles of policy evaluation in the UK Government, known as *The Green Book*. The previous version of *The Green Book* (2011) acknowledged that wellbeing and social impacts should be considered and the latest version of *The Green Book* (2018) increases the focus of wellbeing in appraisal and evaluation and, in effect, puts wellbeing at the heart of policymaking.

Key references/extracts include:

• '2.3 Economic appraisal is based on the principles of welfare economics – that is, how the government can improve social welfare or wellbeing, referred to in The Green Book as social value.' (pg. 5)

Non-market price calculation and estimation

6.15 Social costs and benefits without a market price can be estimated using a range of techniques. Box 14 summarises a hierarchy of the main techniques that can be used. These approaches have strengths and weaknesses that need to be considered when they are used for Social CBA.

Box 14. Valuation Methods for Non-Market Prices

Market prices

Prices from the relevant market (excluding taxes and subsidies). In some cases a closely comparable market can be used where a direct market price is unavailable.

Generic prices

Use of a Green Book approved transferable price applicable to the proposal.

Revealed preference

Techniques which involve inferring the implicit price placed on a good by consumers by examining their behaviour in a similar or related market. Hedonic pricing is an example of this where econometric techniques are used to estimate values from existing data.

Stated preference willingness to pay

Research study by professionally designed questionnaire eliciting willingness to pay to receive or avoid an outcome.

Stated preference willingness to accept

Research study by professionally designed questionnaire eliciting compensation to accept a loss.

Wellbeing

Use of direct wellbeing based responses (in existing data or from research by questionnaire) to estimate relative prices of non-market goods.

Estimation of a central reference value and a range

Based on available data.

The impact on the individual and the wider benefits to government and society

Policy evaluation broadly looks at the two elements of impact and value. Both are relevant to the value of a church as a place where individuals go to worship and socialise and as a place where volunteering and community services are generated.

Primary / Non-Market - the value to individuals.

Has a project, place or activity improved lives? This values life satisfaction, health and wellbeing impacts in both the short and longer term.

Secondary / Market Value - cost replacement of provision by churches

As a result of improving people's lives, do we find revenue or savings to government and society? For example, do we see increased taxes from employment and productivity or savings to the NHS from improved mental health, or savings in policing from reduced crime?

In terms of church services and the provision of services to the community this report considers both. We look at the full range of benefits deriving from the church building and its associated activities as a series of concentric circles moving from primary / non market value to considering secondary / market values.

Unit Cost economic and social values

In the UK, there are a number of compiled resources that can be used to estimate the social value and savings to the exchequer of various outcomes achieved by community activities organised at or by the church. Examples are the Manchester Unit Cost Database (Quinn, Markus and Cox 2011; updated 2019), The HACT Social Value Bank (Trotter et al. 2014; updated 2018), The Unit Costs of Health & Social Care (Curtis and Burns 2019) and others.

APPENDIX 2. DETAILS OF REGRESSION MODELS EMPLOYED TO ESTIMATE WELLBEING EFFECTS FOR CIRCLES 4-6 (NON-MARKET VALUE)

The Understanding Society (USoc) dataset is used for impact analysis at the individual level and is the main source used to derive non-market value in this study. USoc is the successor to the discontinued British Household Panel Survey (BHPS) based at the Institute for Social and Economic Research at the University of Essex. It collects a range of demographic and lifestyle data from individuals and families. The USoc sample covers the entire UK, including all its four constituent countries.

Variables used in this analysis

In this section we will list the main variables used for our regression model, describing in more detail the form in which they appear in each of the datasets.

Treatment variables

The main treatment variable, that is the main variable whose benefits we are trying to identify in Circle 6, should be an indicator of attending church or participating in the life of the church. The table below lists a series of treatment variables that we considered and reported on in Table 8.

Variable name	Question text	Response scale	Waves
Religious affiliation	Do you regard yourself as belonging to any particular religion?	Binary (yes/no)	All waves
Frequency of religious attendance	How often, if at all, do you attend religious services or meetings?	1 Once a week or more 2 Less often but at least once a month 3 Less often but at least once a year 4 Never or practically never 5 Only at weddings, funerals etc.	1, 4
Importance of religion in life	How much difference would you say religious beliefs make to your life? Would you say they make	1 A great difference 2 Some difference 3 A little difference 4 Or no difference?	1, 4
Member of a religious group	Are you currently a member of any of the kinds of organisations on this card? – Religious group or church organisation	Binary (yes/no)	3, 6
Active in a religious group	Whether you are a member or not, do you join in the activities of any of these organisations on a regular basis? – Religious group or church organisation	Binary (yes/no)	3,6

Table A1. Treatment variables in Circle 6

In other circles (Circle 5 and Circle 4), we are also using other variables as the treatment variable when we want to investigate how they explain wellbeing:

Table A2. Treatment variables in Circles 4 and 5

Variable name	Question text	Response scale	Waves
Volunteering in the last 12 months	In the last 12 months, have you given any unpaid help or worked as a volunteer for any type of local, national or international organisation or charity?	Binary (yes/no)	USoc 2, 4, 6
Food security	Do you eat at least one filling meal a day?	Binary (yes/no)	USoc 4, 6
Youth group participation	And how often do you go to youth clubs, Scouts, Girl Guides or other organised activities?	Most days At least once a week At least once a month Several times a year Once a year or less Never / almost never	USoc Youth 2, 4, 6
Anxiety / depression	Do you have any of the health problems or disabilities listed on this card? – Anxiety, depression or bad nerves, psychiatric problems	Binary (yes/no)	BHPS 1-18
Drug / alcohol problems	Do you have any of the health problems or disabilities listed on this card? – Alcohol or drug related problems	Binary (yes/no)	BHPS 1-18

Outcomes

The main outcome variable of interest throughout this study is life satisfaction, measured in USoc on a 7-point scale. Additionally, in Circle 6 there are a series of other outcomes that can be ascribed to the DCMS 5 objectives and were found to be positively associated with church attendance. These cover physical and mental health, personal development / self-efficacy – being able to achieve goals, as well as community development – trust, volunteering, number and quality of friendships, affinity to one's community, and closeness with one's family. All these are reported in the table below.

Table A3. Wellbeing and other individual-level outcomes

Wellbeing variable	Question form	Response scale	Waves
Life satisfaction	Please choose the number which you feel best describes how dissatisfied or satisfied you are with your life overall.	1 (completely dissatisfied) to 7 (completely satisfied)	All waves
General health	In general, would you say your health is (multiple choice)	1 (poor) to 5 (excellent)	All waves
GHQ index	A sum of 12 mental health questions	Each question is 0 (no problems) to 3 (serious problems), resulting in a total of 0 to 36 ⁴⁴	All waves
Self-efficacy	To what extent does the following statement apply to you? – It is easy for me to stick to my aims and accomplish my goals.	1 (Not at all true) to 4 (Exactly true)	5
Can rely on friends	(Thinking about your friends) How much can you rely on them if you have a serious problem?	1 (not at all) to 4 (a lot)	2, 5
Trust in people in general	Would you say that most people can be trusted or that you can't be too careful in dealing with people?	3 Most people can be trusted 2 Depends 1 Can't be too careful	1
Trust in people in neighbourhood	Do you believe most people in your neighbourhood can be trusted?	1 (strongly disagree) to 5 (strongly agree)	3, 6
Volunteering in the last 12 months	In the last 12 months, have you given any unpaid help or worked as a volunteer for any type of local, national or international organisation or charity?	Binary (yes/no)	2, 4, 6

44. A transformation was applied: f(x) = 36-x, so that higher numbers represent positive outcomes.

Demographic control variables

A range of factors are known to have a great influence on our subjective wellbeing. By including these variables in the analysis we can control for these determinants of our wellbeing, so that we can see just the change in wellbeing attributed to religious attendance.

After producing the descriptive statistics for this study, we found (for example) that people who attend religious services occasionally (but not those who attend regularly) have higher income than those who do not attend at all. At the same time, the more money you have, the more likely you are (on average) to have better health, more happiness and overall life satisfaction. It is therefore very important to control for (effectively cancel out the effect of) income and other demographic characteristics in order to avoid biased estimates of the impact of church attendance on wellbeing.

Fujiwara and Campbell (2011) draw up a list of main determinants of life satisfaction found in the literature to date, of which we try to include as much as each dataset provides. It is reasonable to believe that these factors are also likely to influence social outcomes such as trust or friendships. Furthermore, demographics are of interest in themselves in order to describe the composition of those who do not attend religious services at all, those who do so infrequently and those who do so regularly, and to see in what regard these groups are different. A list of demographic variables used in this study and their availability by dataset can be found overleaf:

Table A4. Demographic control variables

Variable	Response scale / categories	Notes / Comments
Age	Whole numbers indicating age in years	
Gender	Male, Female	
Income	Continuous (natural logarithm)	Natural logarithm of equivalised household income
Marital status	Single, Married or civil partner, Separated, Divorced, Widowed, Living as a couple	Originally 10 categories but all civil partnership categories were combined with the respective marriage categories because of small subsamples
Number of children in household	0, 1, 2, 3, 4+	4 or more children grouped together to avoid small bin sizes. Defined as own children aged 0-15 in the household.
Education	Degree or above, Other higher education, A-levels, GCSE, No qualifications	
Employment status	Employed, Unemployed, Student, Retired etc.	
Rural / urban area	Rural, Urban	
Ethnicity (broad categories)	White, Mixed, Asian, Black, Other	More detailed ethnicities are available but they are condensed into these 5 categories to avoid small subsamples.
Region	9 regions of England + Scotland, Wales, Northern Ireland	
Carer status	Yes, No	Indicates whether the respondent has to take care of someone in the household
House ownership	Owned outright, Mortgage, Rented, Rent- free, Other	
Wave of survey	1 to 7	Indicator for each wave in the dataset. Included to account for time trends.
Interview month	January to December	Included to account for seasonality
General health	1 (poor) to 5 (excellent)	Used as a control whenever it is not an outcome, because health is one of the most important drivers of wellbeing
Moving house	Yes, No	Respondent would prefer to move house – an indicator of housing quality / deprivation

The model

In regression analysis, we are able to account for the many determinants of wellbeing / social outcomes that we listed in the "Demographic control variables" section above and enable us to isolate the effect of religious attendance on these outcomes. This is achieved by including them in an Ordinary Least Squares (OLS) regression equation such as:

$O_i = \alpha + \beta_1 T_i + \beta_2 X_i + \varepsilon_i \tag{1}$

Here, O_i is an outcome variable selected from the lists mentioned in the outcome subsection above. T_i is a dummy variable indicating religious attendance (or a series of dummy variables if the variable has several categories)⁴⁵. X_i is a vector of all the control variables available in the dataset, as listed in the "Demographic control variables" subsection; and ε is the error term containing *unobserved* factors that determine the relevant outcomes⁴⁶.

To further insure against the influence of *unobserved* factors (a.k.a. omitted variable bias), OLS analysis can be replaced by Fixed Effects (FE) regressions in panel datasets. The FE model is similar to OLS but looks only at the changes that occur between waves in the variables of an individual that was surveyed more than once. However, because our key treatment variable (frequency of religious attendance) is only available in 2 waves, the data is not good enough for panel data analysis (a good panel dataset would have many waves with low attrition of respondents between waves). Therefore we use OLS results as our main findings and add the caveat that the regression coefficient only represents an association between church attendance and the wellbeing / social outcome, holding a range of demographic factors constant, but does not necessarily indicate a causal effect or a direct benefit of church attendance on wellbeing / social capital.

Furthermore, we can investigate how the association between outcomes and religious attendance varies by religion (e.g. Christians vs. other religions) and rural/urban status. This is done with the help of regression models with interaction terms, such as Equations 2 and 3 below. This would feed into the objective of identifying whether church attendance is associated with higher improvements in social outcomes or wellbeing for more socially vulnerable groups.

$$O_i = \alpha + \beta_1 T_i + \beta_2 T_i Christian_i + \beta_3 T_i Otherrel_i + \beta_4 X_i + \varepsilon_i$$
(2)

$$O_{i} = \alpha + \beta_{1}T_{i} + \beta_{2}T_{i}Christian_{i}Rural_{i} + \beta_{2}T_{i}Christian_{i}Urban_{i} + \beta_{4}T_{i}Otherrel_{i} + \beta_{4}X_{i} + \varepsilon_{i}$$
(3)

The categorical outcome variables, which are coded on ordinal (0-to-10, 1-to-7, 1-to-5 or other) scales, will be treated as cardinal for the purpose of this analysis. Kristoffersen (2017) shows that the cardinality assumption is reasonable in most research contexts, and at the same time it facilitates interpretation and even subsequent monetary valuation of the results.

^{45.} A separate regression is run for each outcome variable and also for each treatment (church involvement) variable, but the same control variables are included in all regressions (with minor exceptions as noted before).

^{46.} There are a series of technical assumptions which underpin the validity of OLS regressions. Among these are random sampling (which the nationally representative surveys do their best to ensure), a true linear relationship between the variables (which can be circumvented to allow for a more flexible functional form by using an age squared term and dummy variables for categorical controls), and the absence of other factors which influence outcomes and treatment at the same time. The last assumption is the most difficult to verify, as there are a plethora of factors which can determine wellbeing and church involvement at the same time.

APPENDIX 3. FULL STATISTICS FROM THE NATIONAL CHURCHES TRUST 2020 SURVEY, 2010 SURVEY, AND REGRESSION ANALYSIS WITH THE UNDERSTANDING SOCIETY DATASET.

These statistics constitute a large proportion of the inputs used throughout our valuation models and calculations. A full table shows the raw statistics for all indicators of church activity collected in the survey⁴⁷.

An equivalent table shows the raw statistics from the National Churches Trust 2010 Survey⁴⁸ and there are raw results of the analysis (descriptive statistics and regressions) using the Understanding Society data⁴⁹.

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^{47.} https://drive.google.com/file/d/1pRsnqjbuvudMAUcGTCAP5JpftyFtJOhd

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