



EUROPE

# **Factors influencing domestic tourism in the UK and abroad and the role of publicly funded domestic tourism marketing**

Phase 2 Scoping report on research methods to address research gaps identified in Rapid Evidence Assessment

Hui Lu, Charlene Rohr



For more information on this publication, visit [www.rand.org/t/RR179-1](http://www.rand.org/t/RR179-1)

Published by the RAND Corporation, Santa Monica, Calif., and Cambridge, UK

**RAND®** is a registered trademark.

RAND Europe is a not-for-profit research organisation that helps to improve policy and decision making through research and analysis. RAND's publications do not necessarily reflect the opinions of its research clients and sponsors.

© Crown copyright 2021

All rights reserved. No part of this book may be reproduced in any form by any electronic or mechanical means (including photocopying, recording, or information storage and retrieval) without permission in writing from the sponsor.

### **Support RAND**

Make a tax-deductible charitable contribution at [www.rand.org/giving/contribute](http://www.rand.org/giving/contribute)

[www.rand.org](http://www.rand.org)

[www.randeurope.org](http://www.randeurope.org)

# Preface

---

This paper has been produced for the UK Department of Culture, Media and Sport (DCMS). It presents and discusses potential research options to address research gaps identified in the Phase 1 literature review, particularly regarding how to measure the impacts of publicly funded domestic tourism marketing on domestic tourism. No additional empirical analysis has been undertaken for this work.

RAND Europe is an independent not-for-profit policy research organisation that serves the public interest by improving policymaking and informing public debate. Our clients are European governments, institutions, and companies with a need for rigorous, impartial, multidisciplinary analysis. This report has been peer-reviewed in accordance with RAND's quality assurance standards – see <https://www.rand.org/about/standards/> – and therefore may be represented as a RAND Europe product.

For more information about RAND Europe or this document, please contact:

Charlene Rohr  
RAND Europe  
Westbrook Centre  
Milton Road  
Cambridge CB4 1YG  
United Kingdom  
Tel. +44 (1223) 353 329  
[crohr@randeurope.org](mailto:crohr@randeurope.org)



# Table of contents

---

Preface .....	iii
Tables .....	vii
Boxes .....	viii
Abbreviations .....	ix
Acknowledgements .....	x
<b>1. Introduction.....</b>	<b>1</b>
1.1 Research context .....	1
1.2 Recap of the research gaps identified from the REA .....	2
1.3 Our approach .....	3
1.4 Structure of the report .....	3
<b>2. Existing data sources that might help address research gaps .....</b>	<b>5</b>
2.1 Reviewing and analysing existing survey data sources .....	5
2.2 Other data sources .....	9
2.3 Conclusions .....	11
<b>3. Primary data that might help address research gaps .....</b>	<b>13</b>
3.1 Introduction .....	13
3.2 Qualitative research .....	13
3.3 Quantitative surveys .....	15
3.4 Discrete choice modelling and stated choice experiments.....	16
3.5 Conclusions.....	18
<b>4. Methods and new data that might help to quantify the impact of publicly funded campaigns 19</b>	<b>19</b>
4.1 Introduction .....	19
4.2 Use of behavioural experiments to guide the development of marketing campaigns .....	19
4.3 Methods to measure existing campaigns.....	20
4.4 Using new data to quantify the impact of publicly funded domestic tourism campaigns .....	23
<b>5. Conclusions and recommendations for a way forward .....</b>	<b>25</b>
5.1 Quantifying the key factors that influence UK residents' decisions to take domestic trips.....	25
5.2 Quantifying the impact of publicly funded domestic marketing campaigns.....	26

5.3	Summary of key research methods .....	26
	<b>References .....</b>	<b>29</b>
	<b>Appendix A Comparison of existing survey data sets .....</b>	<b>33</b>

# Tables

---

Table 1. Evaluation of existing survey data sets to address research gaps identified from Phase 1 ..... 7

Table 2. Feasibility of data from existing surveys to address REA research gaps ..... 9

Table 3. Feasibility of new methods to address the research gaps identified in Phase 1 ..... 27

Table A.1. Tourism information collected from surveys ..... 34

Table A.2. Socio-demographic information collected in each survey ..... 35

## Boxes

---

Box 1. Research questions explored in the REA literature review .....	1
Box 2. Introduction of Discrete Choice Modelling (DCM).....	16
Box 3. Calculating the economic impacts of tourism .....	21

# Abbreviations

---

DAR	Destination Advertisement Responses
DCE	Discrete Choice Experiments
DCM	Discrete Choice Modelling
DCMS	Department for Digital, Culture, Media and Sport
DfT	Department for Transport
DMO	Destination Management Organisation
GB	Great Britain
GBDVS	Great Britain Day Visit Survey
GBTS	Great Britain Tourism Survey
GFRG	General Factor Research Gaps
GSM	Global System for Mobile Communication
IPS	International Passengers Survey
NTS	National Travel Survey
ONS	The Office for National Statistics
PFRG	Publicly Funded Campaign Research Gaps
RCT	Randomised Controlled Trials
REA	Rapid Evidence Assessment
ROI	Return on Investments
RTI	Regional Tourism Indicators
SMROI	Social Media Return on Investment
SP	Stated Preference
UK	The United Kingdom
VFR	Visiting Friends and Relatives
WTTC	The World Travel Tourism Council

## Acknowledgements

---

We would like to acknowledge the input of the many people who have contributed to this study. First, we are grateful to Mr Derek Robbins and Dr Anya Chapman from Bournemouth University for their very helpful advice. We also thank Dr Katherine Carman for her advice on behavioural experiments in the context of measuring the impact of publicly funded domestic marketing campaigns. We would also like to thank the steering group – Amy Fowler, Xanthe Dennis, Michael Wilkinson, Humphrey Walwyn and Harman Sagger from DCMS and VisitEngland – for their direction of the project and input into the rapid evidence review and this paper; their suggestions have helped to improve the study and its outputs. Lastly, we thank Peter Burge and Dr Sue Guthrie for their quality assurance of this paper. However, we emphasise that any errors or omissions herein remain the responsibility of the project team.

# 1. Introduction

---

This section presents:

- Research context;
- Research objectives and methodologies;
- Recap of the research gaps identified in Phase 1 of the study; and
- Structure of the rest of the report.

## 1.1 Research context

The Department for Digital, Culture, Media & Sport (DCMS) commissioned RAND Europe to conduct a study to provide evidence on factors that influence the public's decisions to take domestic holidays, and the role played by publicly funded domestic tourism marketing in that decision-making process. The research involved two phases.

**Phase 1:** A Rapid Evidence Assessment (REA) was conducted to provide a comprehensive, systematic and critical assessment of the scope and quality of available evidence on factors influencing domestic tourism and the impact of publicly funded domestic tourism campaigns. Given the different focus of the two research questions (reproduced in Box 1), the REA targeted literature evidence relevant to each of these questions. The findings and identified research gaps are reported in the research report 'Factors influencing domestic tourism in the UK and abroad and the role of publicly funded campaigns' (Lu et al. 2020).

### Box 1. Research questions explored in the REA literature review

- 1) What are the factors that influence UK residents' decisions to take domestic trips within the UK?
- 2) Within that decision-making process, what is the role and impact of publicly funded domestic tourism marketing on:
  - Influencing the time of year a trip is taken, particularly with regard to encouraging trips out of the peak summer season?
  - Encouraging trips to specific geographic regions, particularly outside of London?
  - Determining whether to take a trip in the UK; to travel abroad; or to not take a trip at all?
  - Determining whether to make a trip to a specific geographic location, as opposed to the experience/product available at that location?

**Phase 2:** An assessment of research methods and existing data sources was conducted, and new bespoke data collection was undertaken to address the research gaps identified in the Phase 1 study.

This research note sets out the results of the Phase 2 assessment exercise, explores the feasibility of potential methods to address research gaps and recommends a way forward. This note should be read along with the Phase 1 REA report for more details of the previous evidence review, and the gaps that were identified.

## 1.2 Recap of the research gaps identified from the REA

The REA identified a wide range of the factors and drivers that influence domestic tourism, including economic factors, destination-related attributes and activities, demographic characteristics, environmental attitudes, weather and transport infrastructure and accessibility. Below we summarise the key research gaps identified in the REA regarding factors that influence the decision to undertake domestic tourism (these are labelled as GFRG, i.e. General Factors Research Gaps):

- **GFRG1: Much of the evidence is dated and some is based on small sample sizes.** The published evidence is rather dated (the median publication date of the literature reviewed is 2013) and some evidence is limited by small sample sizes. For instance, a study by Davison and Ryley (2016) that examined a wide range of factors influencing domestic tourism is based on 485 respondents. Further, a number of studies are qualitative in nature – seeking to identify attitudes and motives – and thus tend to have small sample samples. Moreover, the influence of recent geopolitical trends like Brexit, safety and security issues like pandemics, and new technology and services – such as Airbnb, TripAdvisor, etc. – do not seem to be covered well in the academic literature.
- **GFRG2: Lack of evidence on the relationship between the domestic tourism and international tourism market (i.e. substitutes).** Inconsistent treatment of international tourism in studies, which might (or might not) be a substitute for local tourism, is likely to impact the importance attributed to specific factors, particularly income elasticities. Further research is needed to clarify how international tourism impacts factors affecting domestic tourism.
- **GFRG3: Lack of segmentation analysis.** Most research – and specially the UK-based research that was reviewed – contains limited segmentation, for instance types of tourism, types of travellers, etc. Specifically, we observed little analysis about how different factors influence different holiday types. Some of the research conducted in other countries contains more traveller segmentation; for examples see Hyllemose (2012) (Denmark), Prebensen & Tkaczynski (2012) (Norway) and Molinillo & Japutra (2017) (Spain), which specifically cluster people into different market segments.
- **GFRG4: Lack of evidence on certain factors.** Specifically, factors such as the role of specific events, transport access and some demographic factors (such as income) are included in a small subset of the studies reviewed, meaning that it is difficult to draw conclusions on the impact of these factors. Most research is focused on a limited number of factors and thus only addresses a subset of those of interest.

Further, we found very limited evidence concerning the role and impact of publicly funded campaigns on domestic tourism decision making. Below we summarise the research gaps identified in the REA (these are labelled as PCRG, i.e. Publicly Funded Campaign Research Gaps):

- **PCRG1: Lack of recent evidence on the role of publicly funded campaigns in domestic tourism decision making.** Without such information it is not possible to understand what would constitute an effective campaign.
- **PCRG2: Challenges in measuring the impact of publicly funded campaigns/domestic marketing.** Existing approaches to measurement, including visitor metrics and conversion studies,<sup>1</sup> do not fully account for the impact of exogenous factors. They also fail to account for the increasing role of Internet sources and online social media on tourism choices.
- **PCRG3: Little evidence concerning the impact of destination marketing (domestic or otherwise) on de-seasonalisation** (the movement of trips outside peak season), **dispersion** (the movement of holiday trips to different regions) or **extension** (the extension of trip duration).

### 1.3 Our approach

In this second phase of the study, we assess the feasibility of different options for addressing these gaps. In each case we consider the following criteria:

- **Research design**, including the pros and cons of suggested options.
- **Expected financial cost of design**, including data collection and field work.
- **Sample design**: including who is the group of respondents of interest, sampling strategies, suggested sample size to achieve a robust understanding of main research objectives and differences by segments, and pros and cons of data collection approaches.
- **Potential of the research method to inform research gaps.**

We explore existing data sources and bespoke (primary) data collection methods as well as specific research methods to measure the impact of publicly funded marketing campaigns.

### 1.4 Structure of the report

The structure of the research note is outlined as follows:

- Section 2 presents a review of existing data sources that might help address research gaps;
- Section 3 compares proposed primary data collection research options to address research gaps;
- Section 4 presents research methods to measure the impact of publicly funded campaigns; and
- Section 5 presents conclusions and recommendations for future research.

Appendix A presents detailed information for the Great Britain Tourism Survey (GBTS), Great Britain Day Visit Survey (GBDVS) and International Passenger Survey (IPS) surveys.

---

<sup>1</sup> Conversion studies use surveys to quantify the number of people who request marketing materials about a destination and then subsequently go on to visit that destination. In most instances, they produce a conversion rate.



## 2. Existing data sources that might help address research gaps

---

This section presents:

- Review of the existing survey data and comparison;
- Review of the other data sources; and
- Conclusions and recommendations.

In this section we explore the ability of existing data sets to address research gaps, **particularly those focused on gaps in understanding factors influencing domestic tourism levels** (i.e. the GFGRs discussed in the first section).

### 2.1 Reviewing and analysing existing survey data sources

New analysis of existing data could provide up-to-date evidence on the influence of traditional factors on domestic tourism, helping to address some of the gaps identified in Phase 1 of the study (reproduced in Section 1). In the tourism industry, vast amounts of data have been collected, compiled and archived, and some of them are now accessible for research. As a result, utilising existing data for research (secondary data analysis<sup>2</sup>) is becoming more prevalent.

We identified, reviewed and evaluated three existing data sets to explore the extent to which they address identified research gaps:

**Great Britain Tourism Survey data (GBTS):** The GBTS (VisitBritain 2019b) is a national survey measuring the volume and value of domestic overnight tourism trips taken by residents in Great Britain, and provides detailed information about trip and visitor characteristics. Weekly omnibus surveys are collected with a representative sample of 2,000 adults, providing a sample of around 100,000 respondents per year. The GBTS survey has been running since 2011.<sup>3</sup>

**Great Britain Day Visit Survey (GBDVS):** The GBDVS (VisitBritain 2019a) measures the volume, value and trip characteristics of day visits in Britain. Launched in 2011, the survey uses an online methodology, weekly interviews and an annual sample of 35,000 adults to provide a detailed understanding of the day visit market.

---

<sup>2</sup> Secondary data analysis is analysis of data collected for another primary purpose.

<sup>3</sup> Prior to this, the UK Tourism Survey ran from 2005.

**International Passenger Survey data (IPS):** The IPS survey (ONS, 2018a) collects detailed information about passengers entering and leaving the UK. It has been running continuously since 1961, and now involves around 800,000 face-to-face interviews with a random sample of passengers at air, sea and tunnel ports. Participation is voluntary and the response rate for the 2016 IPS was 74.5 per cent.<sup>4</sup> In the Phase 1 REA, we found that international tourism can influence demand for domestic tourism (for example, as a potential substitute). The data collected from the IPS could potentially provide unique insights on international tourism characteristics and behaviour.

These surveys provide substantial longitudinal data on domestic and international tourism by GB residents. To evaluate the appropriateness of these data sets to address the identified research gaps – and to assess their congruency and quality – we followed a series of evaluative steps set out by Stewart & Kamins (1993):

- What was the purpose of this research (survey, data collection)?
- Who was responsible for collecting the information?
- What information was actually collected?
- When was the information collected?
- How was the information obtained?
- How consistent is the information obtained from one source with information available from other sources?

Table 1 (next page) presents this information for each of the three surveys. Further, detailed information collected in each of the surveys is documented in Appendix A.

Our conclusions on the basis of reviewing these data sets are summarised below.

**Re-analysing the data from the three surveys can provide up-to-date evidence on the impact of factors influencing domestic tourism, incorporating recent innovations (such as AirBnB) into the measurement. However, this is subject to availability of data for re-analysis.**

The three surveys are run annually and all have large sample sizes. Rich information is collected about the types of trips and the characteristics of travellers to provide a detailed understanding of the key markets. Analysing these data would provide up-to-date evidence on many factors affecting tourism. The three surveys cover a wide range of regions and areas in Great Britain, and collect information across years that will document both temporal and spatial changes in tourism markets. It is important to explore the reliability of estimates geographically. In addition, the surveys collect data on some new changes and technologies – for instance, the GBTS survey collects data on the type of accommodation, including new accommodation options such as AirBnB. These data will address, partly, the research gap around the impact of changes and technologies on domestic tourism decision making.

**We conclude that there would be substantial benefit in obtaining disaggregate information from individual records to inform analysis. Investigations of the availability of obtaining disaggregate data for analysis should be undertaken.**

---

<sup>4</sup> According to the ONS, a 74.5 per cent response rate does not mean that 25.5 per cent of passengers approached to participate in the survey refused to participate in the survey. Rather, around 70 per cent of the non-response is due to non-contacts and only around 5 per cent of passengers approached refuse to take part (or provide a minimum response), see ONS (2018b).

Table 1. Evaluation of existing survey data sets to address research gaps identified from Phase 1

	Purpose	Who is responsible for the data	Information collected	Survey time period	Data collection approach	Sample size*
<b>GBTS</b>	Measures the volume and value of domestic overnight tourism trips taken by residents in Great Britain, and provides detailed information about trip and visitor characteristics	VisitEngland, VisitScotland, Cymru Wales (collected by Kantar)	Journey purpose, beds night, expenditure, region visited, type of places visited, accommodation used, start month of trip, life stage, age, gender, marital status, SEC	Weekly survey, 2011 till now (previously was UKTS)	In home, face-to-face approach using TNS's weekly RSGB Omnibus survey using computer assisted personal interviewing (CAPI) approach	Weekly omnibus surveys are conducted with a representative sample of 2,000 adults aged 16 and above within GB (around 100,000 respondents per year)
<b>GBDVS</b>	Measures the volume, value and trip characteristics of tourism day visits in Britain	VisitEngland, VisitScotland, Cymru Wales (collected by Kantar)	Journey purpose, trip duration expenditure, region visited, transport mode, distance travelled, type of places visited, age, gender, marital status, SEC, car access, household structure	Weekly survey, since 2011	Online survey methodology, based on an online panel with demographic quotas based on age, gender, working status, SECs and area of residences every survey wave	34,319 respondents over 2018 during 52 weekly waves
<b>IPS</b>	Collects information about passengers entering and leaving the UK, and has been running continuously since 1961	Office for National Statistics (ONS)	Journey purpose, beds night, region visited, transport mode, age group, country of residence	Since 1961	Anonymous face-to-face interviews are undertaken with a random sample of passengers as they enter or leave the UK	Between 700,000 and 800,000 interviews a year, of which over 250,000 are used to produce estimates of overseas travel and tourism

\*We reported the last step 'how consistent is the information obtained from one source with information available from other sources' in the discussion text above; instead, we present the sample size of the survey data.

**Pooling data from different surveys – particularly GBTS and IPS survey data – could help to address the question of substitution between domestic and international travel identified in the REA. We recommend further investigation of the use of these data for such analysis.**

However, there will be challenges in directly linking the GBTS and IPS data:

- Data from both surveys are published in summary tables only rather than providing disaggregate individual level to researchers, although we have had access to individual level data from IPS for studies in the past.
- The two surveys are run and owned by different organisations (government bodies).
- The data are collected using different questionnaires and samples. While it might be possible to compare and contrast key trends for domestic and international travel, it might be difficult to use the individual-level data from the two surveys together.
- Pooling data from different sources requires advanced statistical mechanisms (for instance hierarchical Bayesian) to provide measures of uncertainty, by permitting the explicit inclusion of information on the errors (e.g. inaccuracy or bias) that are known or are believed to exist in each data source.

Further, none of these surveys collect information on the traveller's income (or household income), which has been identified as a prominent factor influencing domestic tourism decision making.

Therefore, pooling the data from GBTS and IPS could partly address the research gap concerning the relationship between international and domestic tourism (i.e. substitute analysis), but it could be at a relatively aggregate level, which would limit the inclusion of detailed tourist characteristics in the analysis. In addition, pooling data from two surveys where different information is collected presents challenges.

**The constraint of providing data at the aggregate level only might limit the capability of the surveys to address the research gap on the market segments analysis.** Although the three surveys collect respondents' socio-economic characteristics, it appears that the data at individual level is not available for researchers (and it is not clear whether individual level data are available to DCMS). The published evidence is the top-level summary rather than individual record information. The availability of individual data restricts the data analysis from providing insights on the impact of socio-economic characteristics (for instance income, age, gender etc.) on domestic tourism decision making analysis. It should be a priority for DCMS to explore the possibility of getting individual level data for analysis. However, even aggregate analysis can provide top-line findings on the relative importance of domestic and international tourism. An example of such analysis is provided by a report commissioned by the Scottish Tourism Leadership Group, which finds a decline in overnight visitors to Scotland from within GB, but a significant increase in overseas visitors (Scottish Government, 2018). While this analysis focuses on inward tourism, it should also be feasible to explore trends in outward tourism for GB residents.

**A number of important factors identified from the REA are not covered in existing surveys.** Importantly, none of the surveys collect information on household income, attitudes towards climate change or weather, and technology changes (such as Internet and online bookings etc). The REA identified income as an important factor that shapes holiday destination choices. Further, none of the surveys collect information on both domestic and international trips, which would enable analysis of the impact of these factors on the substitution of destinations. It would be beneficial to review and update the data collected in these surveys to collect information on key factors identified in the REA.

Finally, none of the existing surveys collects data on the impact of publicly funded campaigns on domestic tourism. Nor do any of the surveys take into account marketing activity or indeed promotional marketing campaigns. Potentially, information could be collected on why tourists considered or decided to visit a destination, and the specifics of any marketing that they could recall that had encouraged this. However, marketing tends to play on behavioural responses and people might not be conscious of its presence, or their response to it.

In conclusion, we judge that existing survey data could be helpful to address some of the important evidence gaps, particularly around factors influencing tourism, but re-analysis of these data will not address all evidence gaps. Table 2 presents the feasibility of data collected from each survey to address the research gaps identified from the REA.

**Table 2. Feasibility of data from existing surveys to address REA research gaps**

	GFRG1	GFRG2	GFRG3	GFRG4	PCRG1	PCRG2	PCRG3	Potential of research method to inform the design and delivery of future campaigns and future policy
GBTS	2	1	2	1	1	1	1	1
GBDVS	2	1	2	1	1	1	1	1
IPS	2	2	2	1	1	1	1	1

Note: Scoring of the method to address research gaps

1	cannot directly address the research gap
2	can partially address the research gap
3	can address the research gap

Research gaps in the evidence of factors influencing domestic tourism	
GFRG1	Much of the evidence is dated and some is based on small sample sizes
GFRG2	Lack of evidence on the relationship between the domestic tourism and international tourism market (i.e. substitutes)
GFRG3	Lack of segmentation analysis
GFRG4	Lack of evidence on certain factors
Research gaps in the evidence of the role of publicly funded campaigns in domestic tourism decision making	
PCRG1	Lack of recent evidence on the role of publicly funded campaigns in domestic tourism decision making
PCRG2	Challenges in measuring the impact of publicly funded campaigns/domestic marketing
PCRG3	Little evidence concerning the impact of destination marketing (domestic or otherwise) on de-seasonalisation

## 2.2 Other data sources

We also reviewed other data sources and research that might address research gaps, including:

- **National Travel Survey data (NTS):** NTS is a household survey of personal travel by residents of England travelling within Great Britain (DfT, 2019). Data is collected for a seven-day travel diary. Information on long-distance trips, defined as trips over 50 miles, is collected for the travel diary week and the three weeks prior to the survey. The NTS is part of a continuous survey that began in 1988, following ad-hoc surveys from the 1960s, which enables analysis of travel patterns and

trends. The NTS data collects detailed information on all travel made in the travel diary week, plus the three weeks prior to the survey on long-distance trips, including journey length, journey purpose, mode of travel, destination area, as well as household and individual information, such as income, household structure, employment, car ownership, etc. The NTS data is available at the disaggregate level of individuals for researchers with licences. However, NTS data does not collect much information on the destination activity (such as expenditure or length of stay etc). It also does not collect information on international travel. It would not provide any information on the impact of publicly funded campaigns. However, this database could potentially be combined with other tourism survey databases to supplement the tourism survey data with detailed socio-economic information.

- **STEAM:** STEAM is a tourism economic impact modelling process (GTS, 2020) that makes a bottom-up measure of tourism by collecting local, supply-side tourism performance and visitor-survey data. It quantifies the local economic impact of tourism from overnight and day visitors using a wide range of data, e.g. visitor attraction numbers, tourist accommodation bedstock, events attendance, occupancy levels, accommodation tariffs, macroeconomic factors, visitor expenditure levels, transport use and tourism-specific economic multipliers. However, we understand that the model and the input data are not publicly accessible and are owned by a private company. Further, it is not clear whether STEAM provides information to quantify the economic impacts of domestic tourism; however, the approach could be of interest in terms of quantifying the economic impacts of tourism and in measuring the impacts of publicly funded domestic tourism campaigns.
- **The World Travel Tourism Council (WTTC) data:** The WTTC represents the travel and tourism sector globally, and publishes high-level data on the economic impacts of tourism (total tourism), for instance on direct contribution to GDP and leisure tourism spending (WTTC, 2020). This information is valuable in understanding the overall impact of tourism on the economy, but it provides no insight on factors influencing tourism choices or the impact of publicly funded campaigns.
- **The Office for National Statistics (ONS)** publishes a number of reports on domestic tourism. For instance, UK Tourism Satellite Account (ONS, 2019), provides annual inbound, outbound and domestic expenditure on tourism, internal tourism<sup>5</sup> consumption and employment for tourism industries. Information on domestic expenditure on tourism would be useful for calculating the economic impact of tourism (see more details in Section 4.3).
- **Most DMOs** conduct annual visitor surveys/visitor omnibus surveys, but most of these are not in the public domain. In addition, the survey format and information collected are not consistent across the DMO surveys, posing challenges to pool data for analysis. Some of **the local/regional DMO data** is published/searchable from the open data website.<sup>6</sup>

---

<sup>5</sup> Internal tourism is the tourism of visitors, both resident and non-resident, within the economic territory of the country of reference.

<sup>6</sup> Enter search term 'tourism' at [data.gov.uk](https://data.gov.uk) (2020).

- **Private data sources:** For example, commercial or industry data such as Forward Keys flight data,<sup>7</sup> STR hotel occupancy data<sup>8</sup> or credit card payment data. Combined with other data sets, hotel and flight data could potentially be used to understand factors influencing domestic tourism, particularly with regard to substitution between domestic and international tourism. Credit card transaction data could offer an alternative way to measure tourist expenditure. Burson and Ellis (2013) use electronic transaction data to measure and monitor regional tourism in New Zealand. Regional Tourism Indicators (RTIs) were calculated using aggregated electronic card transaction data classified by period, cardholder origin, merchant location and merchant industry. Regional Tourism Estimates (RTEs) leverage electronic card transaction data to produce estimates of absolute spend that can be disaggregated by year, territorial authority, industry and by visitors' country/region of origin. Their findings suggest that these data can differentiate between domestic and international tourists and can provide estimates of domestic tourism expenditure at regional level. Burson and Ellis (2013) report that in addition to monitoring long-term changes in tourism spending, the RTIs are also valued as a tool for assessing the effect of impacts, marketing and other influences on tourism spending. The ONS has worked with credit card companies (such as Barclaycard) on joint research projects on public goods and economic trends.<sup>9</sup> Due to privacy and confidentiality, credit card data is released at an aggregate level.<sup>10</sup> Moreover, these are private data and using these data would have cost implications, but it would be valuable to explore their potential value in helping to understand factors influencing tourism trends and the impacts of marketing and other factors on domestic tourism.

In summary, other research or surveys could provide useful insights to address the research gaps, however this is subject to data availability and consistency of data across surveys collected from different organisations. Collaboration with DMOs or other government bodies might be required in order to understand whether local data could appropriately address the research questions, especially concerning publicly funded campaigns. Where this is not the case, there might be an opportunity to open a dialogue to influence the data collected in future surveys to better address the identified research gaps.

## 2.3 Conclusions

Overall, it is judged that existing data from surveys and other research could be helpful in partially addressing some gaps, but none of them could fully address all of the important evidence gaps identified in the REA. We therefore explore the feasibility of other approaches for addressing the evidence gaps.

---

<sup>7</sup> Forward Keys flight data collects and processes flights booking data. It consists of over 17m booking transactions per day made by over 180,000 online, offline and corporate travel agencies worldwide; over 7m flight searches and picks; and all direct commercial flights globally. See ForwardKeys (2020) for information.

<sup>8</sup> STR collects data on hotel performance, hospitality data insights and hotel occupancy data. See STR (2020) for information.

<sup>9</sup> ONS, 2017.

<sup>10</sup> For instance: UK Finance <Card Spending Update for May 2020>



## 3. Primary data that might help address research gaps

---

This section discusses:

- Primary data collection research methods, including:
  - Qualitative research methods;
  - Quantitative research methods;
    - Discrete choice experiments; and
- Conclusions and recommendations.

### 3.1 Introduction

In this section we explore primary data collection methods, including qualitative research methods and quantitative surveys, to address the research gaps identified in the REA. We **focus on gaps in the understanding of factors influencing domestic tourism levels**. Specific methodologies to address gaps in evidence on publicly funded domestic marketing campaigns are discussed in the next chapter.

### 3.2 Qualitative research

There could be value in undertaking qualitative research to gain richer insights into factors influencing consumers' choices around tourism, such as what drives people's decisions to take a domestic holiday, where they get information to guide tourism choices and the role of the publicly funded campaigns. Qualitative research can help to understand factors influencing decisions to undertake domestic tourism, but these methods will not provide quantification of their impact. Below we discuss a few qualitative research methods that can be used to fill in the research gaps identified.

#### In-depth interviews

In-depth interviews can help to illuminate meaning, capture concerns and record people's detailed explanations for their actions and decisions, and can validate emerging insights of a study. In-depth interviews can yield rich information that cannot otherwise be gained through other research methods.

#### Sample size and data collection

The sample size of the interview research method largely depends on the output required (e.g. if the views of different subgroups of population are required, etc.). The number of interviews will depend on the complexity of the topic, how varied the views of different segments are, budget and timescales. Interviews can be undertaken face-to-face or by telephone (or videoconference). The best approach will depend on the topic and the type of respondents.

## Focus groups or group discussions

Focus groups are a well-established and rigorous method of social research where data is shaped and refined through the group interaction, which is explicitly part of the method (Morgan, 2002). A focus group usually consists of 6–10 people brought together to discuss a particular topic or set of topics, guided by a moderator who facilitates discussion among participants.

Other forms of consultation include the Delphi method, the Nominal Group Technique, Citizen's juries, Deliberative polls, Consensus conferences or workshops, 'participatory appraisal' and 'planning for real'. Each of these methods has their own specific strengths and weaknesses and should therefore be judged on their merits on a case by case basis.

Similarly to in-depth interviews, focus groups are useful in supporting research that aims to open up discussion of a wide range of experiences, test ideas or concepts (e.g. the influence of publicly funded campaign on domestic tourism), or describe different practices across groups of people.

### Sampling and data collection

A focus group usually consists of a group of 6–10 people, and should include respondents with different characteristics. Types of respondents will be guided by the research question. The number of focus groups needed to explore a question will depend on how much heterogeneity in behaviour or views there is in the population of interest. For example, in the case of domestic tourism there would be a question of whether people with higher incomes have the same views as those on lower incomes – and whether better information would be obtained if different focus groups were held with higher income participants and lower income participants. Further, it would be useful to consider whether there would be value in undertaking focus groups in different regions. Inherent to the focus group format is the use of semi-structured moderation protocols (Krueger, 1998).

Focus groups can also be organised online. Using state-of-the-art collaborative online technology, focus groups conducted over the Internet are becoming increasingly popular, especially when the target group consists of hard-to-access individuals. These can be spoken (e.g. via zoom) or typed using a platform such as VisionsLive. Online focus groups are primarily useful when participants do not live close to one another (i.e. in different cities or even countries), and where travel costs would impose a prohibitive burden on the design. Online focus groups might be better ways to engage specific segments of the population, e.g. young people.

### Data analysis

Analysis of detailed transcripts of focus group discussions informs the conclusions drawn about the outcomes. Reports of the group activities should identify dissenting views and similarities in opinions. Findings can be subsequently used as a developmental framework for additional data collection (e.g. surveys), or they can be used as contained descriptions of people's responses to the problem statement.<sup>11</sup>

---

<sup>11</sup> Planning and Evaluation Service, 2005.

### 3.3 Quantitative surveys

The purpose of a quantitative survey is to collect information from a sample of respondents to describe findings and quantify relationships using statistical analysis. Below we set out the research design, sample design, data collection and cost estimation for a quantitative survey research method.

#### Research design

The strength of quantitative survey is that the data from the survey will provide effective and precise information for a representative sample, which can support a robust analysis of the research questions.

#### Sample design and data collection

To enable a statistically robust analysis of factors that influence domestic tourism decision making, it is essential to achieve a representative sample of respondents of sufficient size to quantify statistically the influence of factors collected in the survey. A sufficient sample size will not only allow the researchers to understand the factors influencing domestic tourism across the general population of a country, but also provide insights on the differences of choices or preferences by subgroup of population (i.e. seniors, families with children, etc.). Very large sample sizes would be required to quantify changes in tourism levels across regions. **Analysis of the GBTS data would enable judgements on the sample sizes required to be able to quantify changes at regional level.**

There are a number of different data collection approaches for surveys, such as online survey, telephone interviews and face-to-face interviews. They all have their advantages and limitations. For instance, online surveys are cost-effective and less time consuming, however, they can miss important parts of the population (people who don't have access to the Internet or use it less frequently, such as seniors). The selection of the survey approach will depend on the sample requirements – for some group of respondents, telephone or face-to-face interviews work better (such as older respondents or respondents with certain disabilities, etc.). Different data collection approaches will have different cost implications, with online surveys being less expensive than telephone or face-to-face surveys.

With all surveys, we would recommend that a pilot survey is undertaken with a small number of respondents (for instance 50–100 people<sup>12</sup>) to ensure the survey and data collection methodology are working as intended.

#### Survey costs

The cost of a survey will largely depend on the survey methodology, including the data collection approach and recruitment approach for respondents, the length of the survey, the necessary sample size and the complexity of the data analysis.

---

<sup>12</sup> The sample size of a pilot survey is influenced by many factors, for instance to detect a particular effect or to achieve a certain level of confidence intervals and desired power of statistical analysis.

## Data analysis

Quantitative survey responses will be analysed using statistical software packages (SAS, SPSS, STATA) and simple or more sophisticated analysis tools, depending on the nature of the data and the requirements of the research project.

### 3.4 Discrete choice modelling and stated choice experiments

Discrete choice modelling is an econometric method for quantifying factors that influence actors' choices between discrete options, for example the decision (or not) to take an international or domestic holiday (see Box 2 for more details). Data can be obtained from the choices that actors make in real life (called 'revealed preferences') or from choices that they make in hypothetical circumstances ('stated preferences'), which are usually collected in a survey.

#### Box 2. Introduction of Discrete Choice Modelling (DCM)

Discrete Choice Modelling (Ben Akiva & Lerman, 1985; Train, 2003) is an econometric method for quantifying the relative importance of different factors that influence choices between discrete alternatives, i.e. taking a holiday or not. The basis of DCM is that individuals make choices between goods or services that can be described by attributes. These could include conventional factors, such as hotel prices, weather, transport connectivity and information provision. The outputs of a DCM quantify the relative importance of various attributes, as well as the trade-offs between these factors and the probability of take-up of different combinations of these.

DCM is underpinned by economics. Daniel McFadden won the Nobel Prize in 2000 for his pioneering work in developing the theoretical basis for discrete choice modelling. This method has been widely applied to a number of different areas of public policy – for example, health and social care, the environment and security.

In cases where the data limits the information provided by real choices it may be appropriate to collect stated preference (SP) data, which is information on preferences provided from hypothetical choice situations. A number of procedures for eliciting stated responses exist, but modern practice focuses on the use of discrete choice experiments (DCE), which involve the presentation of hypothetical choice situations to survey respondents. In a DCE each alternative is described by its relevant attributes, e.g. the quality of the service, the cost of the service, future characteristics, etc. Each of the attributes in the experiment is also described by a number of levels, e.g. low cost versus high cost. The attribute levels are combined using principles of experimental design to define different packages of goods or services, which individuals then compare in surveys. This method goes beyond traditional ranking and rating exercises that do not provide information on strength of preference, trade-offs, or probability of take-up. There are many benefits of SP hypothetical choice experiments: (i) choice experiments can reduce correlation between explanatory attributes, since the analyst controls the experimental design; (ii) they provide an efficient means for collecting data, since more than one choice observation can be collected from each respondent; and (iii) stated preference data are particularly useful for evaluation of future policies, for which no revealed preference data exists.

The main drawback is that they are hypothetical. To help ameliorate this drawback it is possible, and desirable, to pool revealed preference and stated preference data.

Discrete choice models are used to quantify how different factors – usually more traditional in nature – could influence people's tourism choices, for example the relative importance of hotel prices, travel costs, travel time, weather, etc.

Research on the relative influence of factors influencing domestic tourism has traditionally been approached using conventional question formats, for example selecting, ranking or rating. This format does not readily support policy makers, as it is hard to translate this information into policy interventions. Knowing that prices, as an abstract concept, are stated to be important when thinking about domestic tourism is not helpful. It is more useful to consider the impact of different price changes, e.g. how would domestic tourism levels change if international airfares were increased by 25 per cent. Specifying questions in this way anchors the concept in a meaningful way and allows clearer insights to be gained into the relative importance ascribed to smaller and larger changes, and how these might compare with the importance placed on changes in other factors (transport accessibility, weather, attitudes to environment, publicly funded marketing, etc).

### **What information is provided by DCEs?**

Discrete Choice Experiments could provide a number of important outputs:

- **Relative importance of factors influencing domestic tourism:** A DCE focused on domestic tourism could provide information on whether the attributes are important (statistically significant), the direction of importance (sign of the estimated parameter), and relative importance (size of the estimated parameter). But while the above information is very useful, the real value of DCEs is in looking at the trade-offs that respondents are willing to make between attributes (such as destination characteristics, exchange rate, predicted weather, prices, etc) as well as the probability of take-up of a specified destination choice (for instance domestic tourism). This type of information cannot be obtained from detailed focus groups or interviews.
- **Trade-offs:** Estimation of trade-offs allows policy makers to estimate how much of one attribute a domestic tourist would be willing to give up to have an improvement in another, for example the relative importance of accessibility relative to hotel prices. Using this information, policy makers can design better policies to increase domestic tourism.
- **Probability of take-up:** DCEs also allow estimation of the probability of individuals making a decision, e.g. taking up a domestic holiday with specified attributes. Such information is very useful when policy makers look at factors influencing domestic tourism.

Moreover, unlike studies of revealed preferences (which quantify how factors influence observed trip making), DCEs can also be used to estimate the effect of policies that are yet to be implemented, such as a new provision of transport services or price changes.

A criticism of stated choices is that respondents do not commit to their choices, i.e. individuals only report how they *think* they would behave. Careful design and piloting can help to mitigate against such biases. Further, the use of revealed preference choice data in conjunction with stated preference data means that both data can be used together to build the best understanding of how factors influence consumer choices. For instance, Davison and Ryley (2016) used a discrete choice (logistic regression) model to analyse the influence of holiday preferences on domestic or international holiday destination choices using data collected through a household survey and interviews with family groups of holiday makers in the East Midlands. A range of socio-economic characteristics were shown to influence the destination choices, for

instance households with children were most likely to holiday in the UK. Younger age groups (such as those aged 18–34) were most likely to travel outside of Europe compared to older age groups.

Another example is Pang (2014), based on data collected through the Australian National Visitor survey, which uses a discrete choice (probit) model to calculate the additional expected probability that certain factors contribute towards the probability of making a domestic trip. The research finds that a range of socio-demographics and economic factors have important impacts on the probability of making domestic trips. For instance, household income (higher income) and country of birth (born in Australia) are found to be important factors in having a higher probability of opting for an overnight domestic trip.

### 3.5 Conclusions

This section has discussed a range of primary data collection approaches, including qualitative and quantitative research methods. The benefit of undertaking primary data collection is that the method can be designed to enable researchers to collect the data in a way that it most useful for the research questions. However, there might also be limitations. Specifically, while primary data can quantify the influence of factors on current behaviour and choices, it will not provide data on longitudinal changes (unless the survey or other method is repeated).

## 4. Methods and new data that might help to quantify the impact of publicly funded campaigns

---

### 4.1 Introduction

The Phase 1 REA concluded that the evidence on the influence of publicly funded destination marketing on domestic tourism is very limited. We distinguish two research areas when discussing quantifying the impact of publicly funded domestic tourism campaigns: (i) understanding important factors that might influence people's tourism decisions and guide the development of tourism campaigns, and (ii) measuring the impact of publicly funded domestic tourism campaigns. We start with a discussion of the use of behavioural experiments to help support understanding of how campaigns could influence peoples' tourism decisions to guide development of marketing campaigns. This is followed by discussion of challenges and some options to measure the impact of publicly funded domestic tourism campaigns. We then discuss research options to measure existing marketing campaigns and explore new data to quantify the impact of publicly funded campaigns.

### 4.2 Use of behavioural experiments to guide the development of marketing campaigns

Marketing draws on heuristics and biases to influence people's behaviour. Therefore, we could draw on behavioural insights to explore how different messages, focusing on the use of heuristics, can be leveraged to influence tourism choices, for example, using priming related to environmental impacts or impacts of travel on the local economy. **Such research would focus on the potential for marketing campaigns to influence behaviour and what types of messages might be most effective for specific audiences.**

In such a study, researchers would test how people respond to a number of different tourism advertisements in terms of the propensity to undertake domestic holidays, affect destination choices and determine season of travel. Researchers can explicitly take into account important cognitive heuristics that could influence the number of domestic holidays, including for example availability bias, affect heuristics and social norms. Prior to designing the survey, the decision-making process will need to be mapped considering where behavioural biases and heuristics might influence decisions. Qualitative research methods, such as focus groups, could be used to understand what types of biases/heuristics seem most promising.

- Affect heuristic: Emotions can influence people's choices, thus campaigns often try to evoke emotions, e.g. fond memories of childhood holidays in the UK, feelings of patriotism, etc.

- Availability heuristic: Decisions often rely on immediate examples that come to mind. Campaigns often tap into this, in the hope that raising the profile of an option increases its selection.
- Social norms: Individuals' decisions are often influenced by the norms that they observe; this can be done by emphasising how common a choice is or by showcasing the behaviour of role models.
- Framing effects: How information is presented can have a significant impact on choices.

As an example, a marketing campaign that focuses on climate change impacts could leverage any of these heuristics, e.g. merely reminding people of the reduced climate impact of taking a holiday close to home leverages the availability heuristic, while campaigns that emphasise that others are reducing their travel to limit climate change would draw on social norms.

Behavioural experiments could be combined with other research methods (for instance, a discrete choice experiment survey). The feasibility of doing this would depend on the length of both methods. For instance, a survey could consist of a DCE (to measure people's choices for domestic or international tourism), and then a behavioural intervention (with marketing material) followed by another DCE. This would help to examine whether people's choices and preferences change, indicating an impact of the marketing materials. Or another approach would be to conduct surveys with two similar (matched) samples where one sample is exposed to the marketing material and the other is not.

After determining the biases that are likely to have the largest impact on domestic tourism decisions, several sample marketing campaigns could be developed using either a static image or brief video and text. For example, researchers could use a seaside image with beach huts, which is not identified as any specific location, to test different messages that draw on different emotions to encourage holidays in the UK, such as nostalgia for childhood or patriotism. A control group of respondents would receive the same image with a neutral message that merely says Visit England. Respondents would be randomised to receive a treatment campaign image or a control image. Following viewing the image, DCE could be conducted to assess whether different images change the choices that respondents make.

From the REA, we find evidence that consumer behaviour research has been adopted in the context of tourism destination choice. Trembath et al. (2011) analyse the impact of destination salience on travel intentions using a survey of travellers known to be interested in domestic travel in Australia. For each participant, salience of seven Australian capital cities was measured using salience stimulus cues, with salience then tested against the participant's prior visitation to and their future intent to visit the destination. Destination attitude measures were also taken using a five-point scale (Trembath et al. 2011). Using multivariate logistic regressions, the researchers found that destination salience is significantly related to intention to visit (even after taking into account previous visitation) – a finding that was consistent across all seven capital cities.

However, behavioural studies will not quantify the specific impact of a publicly funded domestic tourism campaign.

### 4.3 Methods to measure existing campaigns

An issue raised in the REA is that it is becoming more difficult to measure the impact of such campaigns because of the varied ways that people access tourism and destination information (e.g. using the Internet to obtain information, rather than writing to DMOs). Further, using information on hotel bookings, etc.

is less reliable because of new accommodation services, like Airbnb. Moreover, such statistics do not easily quantify the proportion of domestic tourists, compared to those visiting from overseas.

The box below sets out the approach for measuring the economic impacts of tourism more generally (Stynes, 1999). The issue here is to measure the economic impact of destination marketing activities that will lead to tourism and compare it to the cost of the marketing campaign.

### Box 3. Calculating the economic impacts of tourism

The economic impact of tourism is typically estimated by some variation of the following equation:

$$\text{Economic impact of tourism} = \text{Number of tourists} \times \text{Average spending per tourist} \times \text{Multiplier}$$

The multiplier accounts for secondary impacts as a result of average tourist spending. They are usually quantified through input-output analysis.

The particular challenge for measuring the impacts of publicly funded marketing campaigns on domestic tourism is to know who has seen the campaign material, particularly as more holiday planning is done on the Internet, and to quantify the number of domestic tourists to a region, both because it may be difficult to separate domestic and international tourists and because tourists might stay in a wider range of accommodation alternatives, e.g. Airbnb.

In the past, such studies have focused on understanding the impact of DMO marketing by interviewing those who had contacted the DMO for marketing material and measuring the benefits for those who chose to holiday in the destination (allowing for a direct estimation of the number of tourists impacted by the marketing). However, such approaches are less relevant with the increasing role of Internet sources and online social media on destination choice, where it is challenging to identify where people get their information and how they respond to this information. Further, there is very little existing evidence concerning the impact of destination marketing (domestic or otherwise) on de-seasonalisation (the movement of trips outside peak season), dispersion (the movement of holiday trips to different regions) or extension (the extension of the duration of trips).

Academic literature is grappling with the challenge of evaluating the impact of modern publicly funded campaigns, and has not offered solutions to measure impacts of such marketing campaigns. From outside the field of tourism, evaluation work by Lewis and Rao (2015) in the USA concludes 'that measuring the returns to advertising is difficult'. Randomised controlled trials (RCT) were used by firms to attempt to measure the returns to advertising. The study, based on 25 digital RCTs, outlines the challenges of measuring Return on Investment (ROI), and specifically raises issues of '*uncertainty surrounding ROI estimates*' and how costly it is to conduct research into this area effectively. It concludes '*using one of the largest collections of advertising RCTs to date, we have shown that inferring the effects of advertising is exceedingly difficult.*' In addition, this study did not attempt to identify separate impacts for national and international consumers of a product.

In terms of approaches to measure the impacts of advertising and promotion campaigns in the tourism literature, progress is equally limited. Buhalis and Mamalakis (2015) attempt to evaluate the effectiveness of different social media channels and Return on Investment (ROI) using their proposed Social Media

Return on Investment (SMROI) formula, which can be measured in two forms: financial and non-financial. However the formula is simplistic and only based on one case, based on a particular hotel in Rhodes.

Dwyer et al. (2014) offers a methodology to measure a return on marketing investment that attempts to measure 'marketing elasticities' for inbound international tourists to Australia. Whilst the methodology provides a measure – that an additional dollar of marketing expenditure generates approximately \$10 of additional tourism expenditure – this comes with hefty reservations. Specifically, that: i) *'the data limitations confronted in this study, the results should be regarded as indicative only,'* and ii) *'To date, only a small number of studies have attempted to estimate marketing elasticities internationally.'* Further, it is emphasised that the research looks at ROI for inbound international tourists, who must be easier to identify (compared to domestic tourists). Researchers will need to examine the feasibility of translating or applying this approach to the domestic market.

Butterfield et al. (1998) use econometric analysis to measure the effectiveness of advertising campaigns for destinations, again focused on international visits. Econometric analysis normally involves longitudinal analysis, which is carried out over a long period of time. For example, Uysal and Crompton's (1984) study focused on foreign visitors and their expenses in Turkey, based on data collected between 1960 and 1980. The result of these econometric studies is the ratio between tourists' expenditure and the destination's promotional costs (which reflect the return of investment of a DMO on advertising campaigns). However, this research approach has faced similar challenges as the other conversion research methods: the analysis requires a wide range of data input (for instance, visitor income, exchange rates, cost of living of visitors at the destination, and expenses incurred in promotion); large sample sizes, follow-up over several successive years with independent samples and information on tourist expenditure.

Park et al. (2013) use a Destination Advertisement Response (DAR) model to provide DMOs with greater information on the effectiveness of promotional campaigns. Unlike the conversion analysis or econometric models, the DAR model is a 'facets-based' approach that measures the effectiveness of tourism advertising based on six facets of travel: destination, accommodations, attractions, restaurants, events and shopping. They argue that although visitors might have never seen a destination advertisement, they could have seen promotional campaigns about the hotel where they choose to stay or about an event they attend. These factors could have influenced their travel to destinations and even the acquisition of other travel facets.

Choe et al. (2017) conducted a comparison between the DAR model and conversion and econometric analysis models to assess the precision in the measurement of tourist advertising influence on trip planning and expenses incurred in the destination. The study concludes that DAR provides *'a powerful framework for evaluating advertising response in that it incorporates the possibility that destination advertising affects decisions'*. They also conclude that the resulting Gross Conversion estimates are much higher (i.e. overestimate the benefits of advertisements). The DAR approach could offer improvement on methodologies to measure the effectiveness of advertising and might provide further implications of how conversion and ROI can be better measured. However, the DAR model also has its limitations. For instance, this method also requires collecting rich data to support the analysis, especially in terms of behaviour responses and decision processes of tourists. This adds to the complexity because respondents often do not know the real meaning of advertising, or do not have the memory capacity to recall their responses to the marketing campaigns.

Pratt et al. (2010) – which is reviewed in the REA (more details are included in the Phase 1 report) – offers perhaps the best starting point to measure impacts of campaigns. They propose an alternative to the traditional conversion method. Rather than relying on ‘gross conversion rates’ (the overall number of respondents who visited after receiving marketing materials), the authors use ‘net conversion rates’ to more accurately reflect the number of people whose destination choices had actually been influenced by a marketing campaign. However, this study is somewhat out of date: its proposed approaches would need adapting given the more prominent role of social media in promoting destinations. The paper itself acknowledges ‘*common limitations in evaluation methodologies*’.

We conclude that there is no silver bullet – no perfect approach currently exists for measuring the influence of publicly funded campaigns. We therefore explore new data that could potentially address some of the gaps.

#### 4.4 Using new data to quantify the impact of publicly funded domestic tourism campaigns

Mobile phone data offers potential new data sources for measuring mobility (Song et al. 2010). Global System for Mobile Communication (GSM) network operators produce mobile phone billing data that provides an enormous amount of data that has already been utilised in the field of transportation, for instance analysis of travel demand induced by tourism (Ahas et al. 2007; 2008) and estimation of trip origins and destinations, known as ‘OD matrices’ (Friedrich et al. 2010; Pan et al. 2006).

Additionally, with the rise of the Internet new ‘big data’ sources – in particular those derived from geo-tagged social media, such as Facebook or Twitter – offer opportunities to complement traditional sources for tourism statistics. Instead of using big data as a stand-alone source, they could be used in combination with traditional data sources (discussed in Chapter 2) and new primary data (discussed in Chapter 3) to produce up-to-date estimates of domestic tourism numbers, which would support analysis of the success of public marketing campaigns, and their conversion to trips. For instance, data collected from the Facebook Advertising (API) might be able to quantify the proportion of Facebook users who undertake domestic travel based on the geo-location information of their posts (for instance, whether the post location is different from the user’s registration address). The penetration rate in the country could be used along with experts’ opinion to assess the bias due to under- or over-representation of some groups among Facebook users.

As identified in Section 2.7, credit card transaction data could offer an alternative way to measure the impact of marketing campaigns. Burson and Ellis (2013) suggest that information on domestic tourism spending can be identified and segmented, providing data that can differentiate between domestic and international tourists and provide estimates of domestic tourism expenditure at regional level. These data may also be able to provide evidence on the impact of destination marketing on de-seasonalisation or trip extension.

**Targeting future research to better understand whether and how new data sources – such as mobile phone data, data generated from social media providers and credit card expenditure data – might best be utilised would be valuable.**

Further, Facebook and other social media can be used to quantify users' engagement with publicly funded campaigns, for example to measure if they 'liked' or 'repost' the publicly funded campaign information or 'hashtag' the campaign. This could provide information on campaign salience, but will not provide information on whether the individual took a trip, so will not provide information on conversion. Such analysis was undertaken by Mariani et al. (2016), who studied the Facebook marketing activities of 19 Italian regional DMOs over the course of one year (2013). A quantitative content analysis was undertaken to explore end-user engagement with DMO Facebook profiles. Analysis included a number of engagement metrics applied both generally and as a function of post type. The research finds that visual content and moderately long posts are shown to have a statistically significant positive impact on engagement metrics.

## 5. Conclusions and recommendations for a way forward

---

Below we set out our findings and recommendations for further research that aims to: (i) quantify the key factors that influence UK residents' decisions to take domestic trips within the UK; and (ii) quantify the impact of publicly funded domestic tourism marketing in that decision-making process.

### 5.1 Quantifying the key factors that influence UK residents' decisions to take domestic trips

We find that **new analysis of existing data** could provide up-to-date evidence on traditional factors, and might help address some of the gaps identified in the REA. In the tourism industry, vast amounts of data have been collected, compiled and archived, and some of them are made available for research. We have identified, reviewed and evaluated existing survey databases to determine whether they would adequately address the research gaps. We conclude that existing survey data might be helpful to address some of the gaps – particularly around understanding the factors influencing domestic travel – but their use is limited because of gaps in the type of data collected, particularly income and international travel, and data availability.

**We recommend that existing national surveys that collect information on domestic tourism be revised (and expanded) to collect information on (i) international tourism; (ii) the influence of new services, like Airbnb, on travel; and (iii) important socio-economic information, including the respondent's income. Further, there could be value in working collaboratively with DMOs or other tourism survey owners or organisations who implement the surveys, to agree a list of important variables (and their specification) that could be included in their surveys to allow pooling of data more easily.**

**Primary data collection could be undertaken to fill in evidence gaps**, particularly on factors influencing domestic marketing, market segmentation and substitution between international and domestic tourism. This is likely to require a large-scale survey of domestic and international trip making, with explanatory variables specified, as much as is possible, to be consistent with the format of national surveys to allow pooling of data. The survey could include a Discrete Choice Experiment to explore trade-offs between international and domestic tourism, as well as willingness to undertake domestic trips outside of the summer season, to quantify the importance of key variables influencing these choices.

**We recommend that a research project be undertaken to explore in further detail how existing and new data might be used to develop a better understanding of the factors impacting domestic tourism and to quantify their impact on domestic tourism levels.**

## 5.2 Quantifying the impact of publicly funded domestic marketing campaigns

The REA and further literature review in this report show that there is a lack of academic and theoretical progress in the field of quantifying the impact of publicly funded marketing campaigns.

**We recommend exploring the use of behavioural experiments to help develop and test the influence of publicly funded domestic marketing campaigns.** Behavioural experiments could provide insights in how the campaign messages (design) influence the public's preferences and their decision making (and it might be interesting to test whether different marketing materials are able to influence choices to take domestic holidays, and where and when to take these holidays). There might also be benefits in testing marketing campaigns in conjunction with discrete choice experiments (discussed above), specifically to test whether marketing campaigns influence stated tourism choices.

**We recommend that a research project be undertaken to explore whether new 'big data sources' are able to help provide estimates of domestic tourist numbers at specific destinations.** If such data are able to quantify domestic tourist numbers at specific destinations – or expenditure of tourists – it would then be feasible to quantify the impact of domestic marketing campaigns by undertaking campaigns and measuring the change in the number of visitors. Ideally, such work would take account of expected changes in tourist numbers from changes in other background factors from the work discussed in Section 5.1. Alternatively, it might be feasible to also monitor travel to a similar tourist destination where no specific campaign has been undertaken to examine changes in tourist numbers, for comparison. Of course, challenges would remain, for example the time of response to campaigns might not be clear, i.e. whether campaigns lead to short-term or long-term responses. Average tourism spending information could continue to be collected from national surveys. It might be valuable to update input-output analysis to quantify tourism expenditure multipliers, given the changing tourism landscape, e.g. as a result of new accommodation options, etc.

## 5.3 Summary of key research methods

Table 3 presents a comparison of each research method around the four criteria: research design, expected financial cost of design, sample design and potential of the research method to inform the design and delivery of future campaigns and policies.

Table 3. Feasibility of new methods to address the research gaps identified in Phase 1

Potential of research method to address the research gaps identified											
	Research design	Expected financial cost of design	Sample design	GFRG1	GFRG2	GFRG3	GFRG4	PCRG1	PCRG2	PCRG3	Potential of research method to inform the design and delivery of future campaigns and future policy
1	Review and analyse existing data	Low to medium	Sufficient sample size	2	2	2/3	1	1	1	1	1
2	Primary data collection (quantitative survey)	Medium to high, depends on sample size and data collection approach	2,000–3,000, nationally representative	3	3	3	3	1	1	1	1
3	Primary data collection (qualitative survey)	Medium to high, depends on sample size	200–300 with different subgroups	2	2	2	2	2	2	2	2/3
4	Discrete choice experiment*	Medium to high	2,000–3,000, nationally representative	2/3	2/3	2/3	2/3	2	2	2	2
5	Behaviour experiment*	Medium to high	2,000–3,000, nationally representative	1	1	1	1	3	2	2	2/3
6	Review other marketing evidence beyond tourism	Low to medium	Not relevant	1	1	1	1	2	2	1	2
7	New data (big data)	Medium to high	Not relevant	1	1	1/2	1/2	2	2	1/2	2

\*Most of the time, DCE and Behaviour experiments are embedded in a quantitative survey

Scoring of the method to address research gaps:

1	Cannot directly address the research gap
2	Can partially address the research gap
3	Can address the research gap

Expected financial cost range:

Low	Below £50k
Medium	£50–150k
High	Over £150k

<b>Research gaps in the evidence of factors influencing domestic tourism</b>	
GFRG1	Much of the evidence is dated and some is based on small sample sizes
GFRG2	Lack of evidence on the relationship between domestic tourism and international tourism market (i.e. substitutes)
GFRG3	Lack of segmentation analysis
GFRG4	Lack of evidence on certain factors
<b>Research gaps in the evidence of the role of publicly funded campaigns in domestic tourism decision making</b>	
PCRG1	Lack of recent evidence on the role of publicly funded campaigns in domestic tourism decision making
PCRG2	Challenges in measuring the impact of publicly funded campaigns/domestic marketing
PCRG3	Little evidence concerning the impact of destination marketing (domestic or otherwise) on de-seasonalisation

## References

---

- Ahas, R., A. Aasa, Ü. Mark, T. Pae & A. Kull. 2007. 'Seasonal tourism spaces in Estonia: Case study with mobile positioning data.' *Tourism Management*, 28(3): 898–910.
- Ahas, R., A. Aasa, A. Roose, Ü. Mark & S. Silm. 2008. 'Evaluating passive mobile positioning data for tourism surveys: An Estonian case study.' *Tourism Management*, 29(3): 469–486.
- Ben-Akiva M. & S.R. Lerman. 1985. *Discrete Choice Analysis: Theory and Application to Travel Demand*. The MIT Press.
- Buhalis, D. & E. Mamalakis. 2015. 'Social media return on investment and performance evaluation in the hotel industry context.' In *Information and communication technologies in tourism*, edited by I. Tussyadiah & A. Inversini, 241–253. Springer, Cham.
- Burson, R. & P. Ellis. 2013. 'Using electronic card transaction data to measure and monitor regional tourism in New Zealand.' Ministry of Business, Innovation & Employment. As of 10 August 2020: [https://www.mlit.go.jp/kankocho/naratourismstatisticsweek/global/pdf/full\\_paper/3-3.pdf](https://www.mlit.go.jp/kankocho/naratourismstatisticsweek/global/pdf/full_paper/3-3.pdf)
- Butterfield, D.W., A.A. Kubursi, & K.R. Deal. 1998. 'Measuring the returns of tourism advertising,' *Journal of Travel Research* 37(1): 12–20.
- Choe, Y., J.L. Stienmetz & D.R. Fesenmaier. 2017. 'Measuring destination marketing: Comparing four models of advertising conversion.' *Journal of Travel Research* 56(2): 143–157.
- Davison, L. & T. Ryley. 2016. 'An examination of the role of domestic destinations in satisfying holiday demands.' *Journal of Transport Geography*, 51: 77–84. doi:10.1016/j.jtrangeo.2015.11.007
- Data.gov.uk. 2020. 'Find open data.' As of 14 August 2020: <https://data.gov.uk/search>
- Department for Transport. 2019. 'National Travel Survey,' As of 11 May 2020: <https://www.gov.uk/government/collections/national-travel-survey-statistics>
- Dwyer, L., T. Duc Pham, P. Forsyth & R. Spurr. 2014. 'Destination marketing of Australia: Return on investment.' *Journal of Travel Research*, 53(3): 281–295.
- ForwardKeys (homepage). 2020. As of 14 August 2020: <https://forwardkeys.com/>
- Friedrich, M., K. Immisch, P. Jehlicka, T. Otterstätter & J. Schlaich. 2010. 'Generating OD matrices from mobile phone trajectories.' Presented at the 89th Annual Meeting of the *Transportation Research Board*, Washington, D.C., January 2010.
- Global Tourism Solutions. 2020. 'STEAM model.' As of 11 May 2020: <https://www.globaltourismsolutions.co.uk/steam-model/>
- Hyllemose, L. 2012. *Denmark – A destination for a Dane*. As of 10 August 2020: [https://research-api.cbs.dk/ws/portalfiles/portal/58429682/pia\\_hyllemose\\_larsen.pdf](https://research-api.cbs.dk/ws/portalfiles/portal/58429682/pia_hyllemose_larsen.pdf)
- Krueger, R.A. 1998. *Focus Groups: A Practical Guide for Applied Research*. Newbury Park, CA: Sage Publications Inc.
- Lewis R.A. & J.M. Rao. 2015. 'The unfavorable economics of measuring the returns to advertising.' *The Quarterly Journal of Economics*, 130(4):1941–1973.
- Lu, H., W. Phillips, J. Francombe, F. Dunkerley & C. Rohr. 2020. 'Factors influencing domestic tourism in the UK and abroad and the role of publicly funded domestic tourism marketing: A rapid evidence assessment.' RAND Research Report RR-A179-1, prepared for Department of Digital, Culture, Media & Sport.

- Mariani, M.M., M. Di Felice & M. Mura. 2016. 'Facebook as a destination marketing tool: Evidence from Italian regional Destination Management Organizations.' *Tourism Management*, 54: 321–343. doi:10.1016/j.tourman.2015.12.008
- Molinillo, S. & A. Japutra. 2017. 'Factors influencing domestic tourist attendance at cultural attractions in Andalusia, Spain.' *Journal of Destination Marketing and Management*, 6(4): 456–464. doi:10.1016/j.jdmm.2016.09.011
- Morgan, D.L. 2002. 'Focus group interviewing.' In *Handbook of interviewing research: Context & Method*, edited by J.F. Gubrium & J.A. Holstein, 141–159. Thousand Oaks, CA: Sage Publications Inc.
- Office for National Statistics. 2017. 'Using credit card payments data for the public good.' As of 14 August 2020: <https://blog.ons.gov.uk/2017/12/13/using-credit-card-payments-data-for-the-public-good/>
- . 2018a. 'International Passenger Survey 2018.' As of 17 August 2020: <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/internationalmigration/adhocs/008748internationalpassengersurveyestimates>
- . 2018b. 'International Passenger Survey: quality information in relation to migration flows.' As of 14 August 2020: <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/internationalmigration/methodologies/internationalpassengersurveyqualityinformationinrelationtomigrationflows>
- . 2019. 'UK Tourism Satellite Account: 2017.' As of 5 May 2020: <https://www.ons.gov.uk/economy/nationalaccounts/satelliteaccounts/bulletins/uktourismsatelliteaccountuktsa/latest>
- Pan, C., J. Lu, S. Di & B. Ran. 2006. 'Cellular-Based Data-Extracting Method for Trip Distribution.' Presented at the 85th Annual Meeting of the *Transportation Research Board*, Washington, D.C., January 2006.
- Pang, K.P. 2014. 'Impact of socio-demographics, fuel price and airfare on the domestic overnight travel decision in Australia.' *Tourism Economics*, 20(6): 1297–1318. doi:10.5367/te.2013.0341
- Park, S., J.L. Nicolau & D.R. Fesenmaier. 2013. 'Assessing advertising in a hierarchical decision model.' *Annals of Tourism Research* 40(1): 260–282.
- Planning and Evaluation Service. 2005. *Focus Group Questions*. Washington DC: Department of Education.
- Pratt, S., S. McCabe, I. Cortes-Jimenez & A. Blake. 2010. 'Measuring the effectiveness of destination marketing campaigns: Comparative analysis of conversion studies.' *Journal of Travel Research*, 49(2), 179–190. doi:10.1177/0047287509336471
- Prebensen, N.K. & A. Tkaczynski. 2012. 'Domestic nature-based tourism: A case study of Norway.' *Tourism Analysis*, 17(6): 733–745. As of 10 August 2020: [https://www.researchgate.net/publication/311228420\\_Domestic\\_nature-based\\_tourism\\_a\\_case\\_study\\_of\\_norway](https://www.researchgate.net/publication/311228420_Domestic_nature-based_tourism_a_case_study_of_norway)
- Scottish Government. 2018. 'Tourism in Scotland: The Economic Contribution of the Sector.' Culture, Tourism and Major Events Directorate, commissioned by the Tourism Leadership Group, April 2018. As of 11 May 2020: <https://www.gov.scot/publications/tourism-scotland-economic-contribution-sector/pages/7/>
- Song, C., Z. Qu, N. Blumm & A.-L. Barabási. 2010. 'Limits of predictability in human mobility.' *Science*, 327(5968),: 1018–1021.
- Stewart, D. W., & M. A. Kamins. 1993. *Secondary research: Information sources and methods*. Newbury Park, CA: Sage.
- STR (homepage). 2020. As of 14 August 2020: <https://str.com>
- Stynes, D. 1999. 'Approaches to estimating the economic impacts of tourism: some examples.' As of 11 May 2020: <https://msu.edu/course/prr/840/econimpact/pdf/ecimpvol2.pdf>
- Train, E. 2003. *Discrete Choice Methods with Simulation*. Cambridge University Press.

- Trembath, R., J. Romaniuk & L. Lockshin. 2011. 'Building the Destination Brand: An Empirical Comparison of Two Approaches.' *Journal of Travel & Tourism Marketing*, 28(8): 804–816. doi:10.1080/10548408.2011.623038
- UK Finance, 2020, 'Card Spending Update for May 2020'. As of 3 September 2020: [https://www.ukfinance.org.uk/sites/default/files/uploads/Data%20\(XLS%20and%20PDF\)/Card-Spending-Update-May-2020-final.pdf](https://www.ukfinance.org.uk/sites/default/files/uploads/Data%20(XLS%20and%20PDF)/Card-Spending-Update-May-2020-final.pdf)
- Uysal, M. & J. Crompton. 1984. 'Determinants of demand for international tourist flows to Turkey.' *Tourism Management* 5(4): 288–297.
- VisitBritain. 2019a. 'The Great Britain Day Visitor 2018 Annual Report.' As of 5 May 2020: [https://www.visitbritain.org/sites/default/files/vb-corporate/gbdvs\\_2018\\_annual\\_report.pdf](https://www.visitbritain.org/sites/default/files/vb-corporate/gbdvs_2018_annual_report.pdf)
- . 2019b. 'The GB Tourist 2018 Annual Report.' As of 7 May 2020: [https://www.visitbritain.org/sites/default/files/vb-corporate/40413193-260c\\_gb\\_tourist\\_annual\\_report\\_2018\\_fv-v3.pdf](https://www.visitbritain.org/sites/default/files/vb-corporate/40413193-260c_gb_tourist_annual_report_2018_fv-v3.pdf)
- Welsh, P. 2018. 'Tourism Performance Update.' Report to Tourism, Economy and Resources Scrutiny Committee, 6 June 2018. As of 11 May 2020: <https://democracy.blackpool.gov.uk/documents/s36486/ITEM%2010%20-%20Tourism%20Scrutiny%20Report%20-%20June%202018.pdf>
- WTTC. 2020. Economic Impact Reports. As of 11 May 2020: <https://wttc.org/en-gb/Research/Economic-Impact>



## Appendix A Comparison of existing survey data sets

---

Table A.1. Tourism information collected from surveys

	Purposes	Bed nights	Expenditure	Region visited	Accommodation used	Transport mode and distance travelled	Type of places visited	Start month of the trip
<b>GBTS</b>	<ul style="list-style-type: none"> <li>- Holiday/pleasure/leisure (by number of nights)</li> <li>- Visiting Friends and Relatives (VFR)</li> <li>- Business travel</li> <li>- Travel is work</li> <li>- School trip</li> </ul>	<ul style="list-style-type: none"> <li>- 1–3</li> <li>- 4–7</li> <li>- 8+</li> </ul>	<ul style="list-style-type: none"> <li>- Price of package holiday/inclusive trip</li> <li>- Accommodation</li> <li>- Travel costs to and from destination, and during the trip</li> <li>- Services or advice</li> <li>- Buy clothes</li> <li>- Eating and drinking</li> <li>- Other shopping</li> <li>- Entertainment</li> <li>- Anything else</li> </ul>	WM, EE, EM, London, NW, NE, SE, SW, Y&H	<ul style="list-style-type: none"> <li>- Commercial</li> <li>- Commercial serviced</li> <li>- Hotel/motel/guest house</li> <li>- Paying guest</li> <li>- Self-catering (incl/excl. caravan and camping)</li> <li>- Hostel</li> <li>- Home (own/friend's/relative's)</li> <li>- Other (tent, glamping, alternative accom.)</li> <li>- Airbnb / Someone else's home</li> </ul>	n/a	<ul style="list-style-type: none"> <li>- Seaside</li> <li>- City /large town</li> <li>- Small town</li> <li>- Country side/village</li> </ul>	Month
<b>GBDVS</b>	<ul style="list-style-type: none"> <li>(Leisure activities)</li> <li>- VFR</li> <li>- Special shopping</li> <li>- Going out for a meal</li> <li>- Going on a night out to a bar, pub or club</li> <li>- Going out for entertainment - cinema, concert or theatre</li> <li>- Undertaking outdoor leisure activities such as walking, cycling, golf etc</li> <li>- Taking part in other leisure activities</li> <li>- Taking part in sports</li> <li>- Watching live sporting events</li> <li>- Going to visitor attractions</li> <li>- Going to special public events</li> <li>- Going on days out to a beauty or health spa</li> </ul>	Duration information: <ul style="list-style-type: none"> <li>- 3–3.59hrs</li> <li>- 4–4.59hrs</li> <li>- 5–5.59hrs</li> <li>- 6+ hrs</li> </ul>	<ul style="list-style-type: none"> <li>- Eating and drinking out</li> <li>- Food bought in a shop</li> <li>- Road transport - fuel bought during the trip</li> <li>- Rail, tube or tram transport</li> <li>- Tickets/entrance to events, shoes, clubs etc</li> <li>- Entrance to visitor attractions</li> <li>- Used a travel card/pass</li> <li>- Tickets to watch sporting events</li> <li>- Entrance to sports/leisure centres</li> <li>- Hiring a car or other vehicle</li> <li>- Used a season ticket/pass</li> </ul>	Local authorities visited and regions	n/a	Transport used: <ul style="list-style-type: none"> <li>- car (own, hired, other)</li> <li>- public transport</li> <li>- tube/tram</li> <li>- walked</li> <li>- other Miles travelled</li> </ul>	In the analysis, merged to four types: <ul style="list-style-type: none"> <li>- seaside</li> <li>- city/large town</li> <li>- small town</li> <li>- country side/village</li> </ul>	Month

Factors influencing domestic tourism and the role of publicly funded marketing

	- Going on general days out/to explore an area - Going on day trips/excursions for other leisure purpose not method above		- Water transport - Air transport					
<b>IPS</b>	- Holidays - Visiting friends and relatives - Business - Study - Many other 'miscellaneous' reasons (including medical treatment, watching sport or shopping) - It excludes transit passenger	Collect length of study for visits less than a year	For overseas residents, this excludes amounts spent on fares to and from the UK. The survey records spend in UK towns	- UK region of stay (note that visit to different regions might be treated as different visits)	n/a	- Air - Sea - Tunnel	Record place of visit	

Table A.2. Socio-demographic information collected in each survey

	Age	Gender	Region of residences	Marital status	Life stage	Car access	Children in household
<b>GBTS</b>	- 16–24 - 25–34 - 35–44 - 45–54 - 55–64 - 64	- Male - Female	GB - Wales - Scotland - England (EE, EM, WM, London, NE, NW, SE, SW, Y&H)	- Married - Single - Separated /widowed /divorced	- Pre nesters - Families - Older independents - Empty nesters	n/a	n/a
<b>GBDVS</b>	- 16–24 - 25–34 - 35–44 - 45–54 - 55–64 - 64	- Male - Female	GB - Wales - Scotland - England (EE, EM, WM, London, NE, NW, SE, SW, Y&H)	- Married - Single - Separated /widowed /divorced	n/a	yes/no	yes/no
<b>IPS</b>	By age group, children under 16 are also part of the sample	- Male - Female	- Country of residence	n/a	n/a	n/a	n/a