Study on Consumer Detriment in the area of Dynamic Packages

Final report to

The European Commission – Health and Consumers DG

Prepared by

London Economics

November 2009

The European Commission – Health and Consumers DG

Prepared by

London Economics

November 2009

Contents

Contents

Contents

Page

Contents

Page

Tables & Figures

Page

Tables & Figures

Page

Tables & Figures

Page

Tables & Figures

Page

Tables & Figures

Page

Tables & Figures

Page

Tables & Figures

Page

Glossary

Member State abbreviations

BE	Belgium	LU	Luxembourg
BG	Bulgaria	HU	Hungary
CZ	Czech Republic	MT	Malta
DK	Denmark	NL	Netherlands
DE	Germany	AT	Austria
EE	Estonia	PL	Poland
EL	Greece	PT	Portugal
ES	Spain	RO	Romania
FR	France	SI	Slovenia
IE	Ireland	SK	Slovakia
IT	Italy	FI	Finland
CY	Cyprus	SE	Sweden
LV	Latvia	UK	United Kingdom
LT	Lithuania		

Executive Summary

The context for this study is an increasing trend, in some Member States, for consumers to put together their own holiday components from different providers (so called dynamic packaging), instead of opting for packages pre-arranged by an organiser or a retailer.

The EU travel sector is the subject of Council Directive 90/314/EEC of 13 June 1990 on package travel, package holidays and package tours (henceforth, the Directive). The applicability of the Directive to certain of these new types of travel arrangements is unclear. This uncertainty and possibly divergent interpretations and implementation of the Directive by the Member States may affect competition and consumer protection.

Against this background, the aim of this study is to estimate the level of consumer detriment in the EU 27 in the area of dynamic travel packages.

Definition of dynamic travel package

For the purpose of this study, we required a workable definition of dynamic travel package, on the basis of which to construct the necessary survey questions to identify respondents who had and who had not made travel arrangements of this type. We consider that a set of travel arrangements constitute a dynamic package when two conditions are met:

1. It is a package i.e.
    - it includes two or more elements that are not insignificant relative to the total value of the package (e.g. flight, accommodation and car rental);
    - the suppliers of these different elements are commercially linked; and
    - the elements are bought at the same time.
2. It is dynamic i.e.
    - it is put together by the consumer, who decides which elements to add and which to exclude;
    - it allows a significant degree of tailoring by the consumer

Definition of consumer detriment

Consumer detriment can be defined as harm or damage to consumers that occurs in connection with a particular market transaction. Consumer detriment and can be classified as either personal or structural detriment.[1]

Personal detriment is harm or damage at the individual consumer level. It is reflected by actual experiences falling below what could have reasonably been expected. Personal consumer detriment includes both financial and non-financial detriment. Financial detriment would typically include elements such as costs of repair or replacement, loss of earnings and cost of legal advice. Non financial detriment refers to less easily quantifiable losses such as loss of time, adverse effects on health and psychological detriment arising from for example emotions such as anger and frustration.

Structural detriment is loss of consumer welfare at an aggregate level due to market or regulatory failures. For instance, structural detriment can arise from market failures such as informational asymmetries, market power and externalities. Structural detriment could also arise as a result of regulatory interventions such as restrictions on prices, quantities and product characteristics, impacts on sellers' costs, or as a result of acts of omission in regulation.

The main body of this report considers the potential sources of each type of detriment in the market for dynamic travel packages and then makes an assessment of the level of consumer detriment in this market for the entire EU-27.

Main conclusions

- The study estimates that 23% of the population in EU-27 have used dynamic packages within the last 2 years.
- Eighty percent of consumers who use dynamic packages think that financial protection is included. Some dynamic packages such as packages purchased from **one** website are more likely fall under the current scope of the Directive and therefore include financial protection. For these packages 80% of consumers think that financial protection is included.
- The study also considers packages where all components where not purchased at the same time and packages where billings were issued from several companies. Although these packages are unlikely to fall under the current scope of the Directive, 67-68% of respondents think that the package includes financial protection.

[1] Europe Economics "An analysis of the issue of consumer detriment and the most appropriate methodologies to estimate it", Report for DG SANCO, 2007, www.eer.co.uk/download/2008%20EC%20cd%20es.pdf - reference to DG SANCO web page- http://ec.europa.eu/consumers/strategy/docs/study_consumer_detriment.pdf

- Our study estimates yearly personal consumer detriment for users of dynamic package travel in the EU-27 at €1,065 million gross and €1,005 million net (after compensation).

- The main contributing factors for these costs are follow-up communication costs and replacement costs, particularly for inward and outward travel and accommodation. The most common type of problems are provision of incorrect or incomplete information, problems with transport delays or cancellations, and problems with services not being provided or being of a lower standard than expected.

- Within the broadly defined category of dynamic packages, we studied particular segments. Some of these segments are more likely to fall under the current scope of the Directive such as packages purchased from a single website; for these, we estimated gross detriment at €88 million.

- Other dynamic travel arrangements are unlikely to fall within the scope of the Directive. These includes arrangements where all components of the package are not purchased at the same time and/or where the consumer receive separate billings from different companies; for these the estimated gross detriment stands at €124 million and at €237 million , respectively.

- These costs compare unfavourably with estimates for other types of travel arrangement that were made based on a sub-sample of respondents. For traditional packages we estimated gross personal detriment at €159 million.

- Our study also looked at structural consumer detriment. This detriment arises, in particular, due to some consumers not being aware of the different levels of protection that different types of travel arrangements afford. We concluded that the lack of information by a significant fraction of travellers and the large and growing importance of the dynamic travel package sector would be likely to combine to make structural detriment in this market significant.

- On a methodological note, our study can be seen as a successful application of the survey methodology for the estimation of personal consumer detriment. However, we felt the need of a more developed framework for the calculation of structural detriment and of a better understanding of the formal relationship between these two types of detriment.

Methodology for assessment of consumer detriment

In order to make a detailed assessment of each of the two types of consumer detriment in the dynamic package travel market we first considered the potential sources of detriment in relation to each.

For personal detriment, we considered harm to consumers arising from 'problems' occurring in relation to their holiday arrangements. A wide range of possible

problems was considered and the methodological approach relies on a very large survey of travellers with questions on the incidence and costs associated with such problems.

For structural detriment, we considered the possibility of market distortions being introduced by consumers lacking information about the differing levels of consumer protection afforded by different types of travel arrangements. As a result of this, consumers are likely to make sub-optimal purchasing decisions potentially over-paying and over-buying dynamic travel packages. The quantification of these effects is based on estimating the impact of sub-optimal purchasing decisions on consumer surplus.[2]

Consumer survey

The estimation of the level of consumer detriment associated with dynamic packages in EU-27 is based on survey data. A survey of consumers who have used dynamic packages in the last two years was carried out in a representative sample of 17 EU countries. The sample was selected on the basis of three criteria: importance of the travel sector (proxied by the number of holidays longer than one-night stay taken by residents per year); travel package expenditure by residents; and degree of internet usage (which can impact on how likely consumers are to buy dynamic travel packages). The 17 selected for the survey included both larger and smaller Member States, old and newer Member States and countries with differing degrees of travelling propensity and internet penetration. They are: UK, Greece, Finland, Sweden, Denmark, Ireland, Netherlands, France, Germany, Austria, Spain, Italy, Poland, Czech Republic, Hungary, Slovenia, and Bulgaria.

The introduction to the survey included a description of what types of travel arrangements could be considered dynamic package and which could not. A total of 500 responses were obtained in each of the 17 survey countries. However, despite our introductory description of the definition of dynamic packages, it appears that respondents have difficulties determining whether their travel arrangements constitute a dynamic package. In particular, some respondents answered that their dynamic package included only one component. This is clearly a misunderstanding of the concept of a 'package' and therefore we exclude such responses from the analysis of survey responses.

Furthermore, to ensure representativeness of the sample we undertake ex-post stratification of the sample using frequency weights. This involves matching the age and gender structure of the sample each of the survey countries to that of the population.

[2] Consumer surplus is a measure of the benefit that a consumer gains from participating in a certain market. The typical consumer on its typical transaction will have a willingness to pay that exceeds the price. That difference, aggregated over all consumers participating in a given market, is the 'consumer surplus.'

Survey results suggest that 23% of the EU-27 population have used dynamic packages within the last 2 years and the use of dynamic packages is somewhat correlated with internet penetration and GDP per capita. This suggests that dynamic packages may become even more prevalent in the coming years.

Estimation of personal consumer detriment

Personal detriment arises if people experience problems with their dynamic package. We estimate that 8.2% of the dynamic packages purchased in the 17 survey countries cause problems. In comparison, only 3.1% of traditional travel package are estimated to have caused problems. Based on these result we estimate that 1.9% of the population in EU-27 has been affected by problems with dynamic packages within the last 2 years.

Gross and net personal detriment is estimated based on the consumer survey and extrapolated to the entire population of the survey countries and to EU-27. Gross personal detriment is calculated as the total costs associated with problems with dynamic packages plus the value of time spent complaining over these problems. Net personal detriment is defined as gross personal detriment less any compensation that the holidaymakers may have received.

Our estimates of EU-27 yearly aggregate gross and net personal detriment associated with dynamic packages are €1,065 million and €1,005 million, respectively. Furthermore, it appears that packages purchased using only one website cause on average smaller detriment than packages where all components were not purchased at the same time or for which several billings were received. In particular, the average detriment per problem for packages purchased from one website was estimated at €282 for EU-17. In comparison for packages where all components were not purchased at the same time the estimate was €595 and for packages with several billings the figure was €1,286. The latter two types of packages do not appear to be covered by the current scope of the Directive whereas the former does.

Assessment of structural consumer detriment

The possibility of consumer detriment arising from the purchase of dynamic travel packages relates mainly to the differing level of consumer protection that these purchases offer compared with 'traditional' travel packages and the respective lack of awareness on the part of consumers.

This informational problem may lead consumers to sub-optimal decisions where, at the margin, what they pay for their travel arrangements exceed the corresponding level of consumer surplus. There are a number of elements that impact the potential significance of structural detriment in this market. These include the valuation for consumer protection, the fraction of consumers that are unaware of the different levels of protection, the costs for suppliers of providing this travel protection and whether or not these change with quantities transacted, and the price sensitivity of demand.

Some, if not all, of these elements would be quite difficult to quantify. In addition, quantitative estimates of structural detriment would require an analysis of the pricing of travel services across both the dynamic and the traditional travel package segments. In particular, we would require information on how cost-reflective prices are and on how much 'price discrimination' sellers in this market are able to achieve.

Thus, given the uncertainty surrounding some of these elements, we have not attempted to quantify structural detriment in this market. However, given the high fraction of consumers that buy dynamic packages and are unaware of the differing levels of protection received under dynamic and traditional packages and given the increasing significance of the dynamic package travel market overall, the level of structural detriment arising due to the distortions in this market is likely to be significant.

On the other hand, the presence of sellers of non-protected travel products can enhance choice for consumers, being particularly beneficial to those whose valuation for protection is lower than the cost of providing it. In addition, the entry of new travel service providers into the market may have had an important effect on competition, lowering prices and enhancing choice for consumers. However, this could only be measured by determining the extent to which there was weak competition in a market dominated by the traditional package travel suppliers.

Discussion of the approach and the results

This study provides a very comprehensive approach to the estimation of personal consumer detriment in the market for dynamic travel packages. Our results are based on a detailed survey covering 17 EU countries and a total of more than 49,000 respondents (before screening for past users of dynamic travel packages) and 8,500 respondents who had previously made dynamic travel arrangements.

Our survey allowed us to estimate incidence of dynamic travelling in the EU 27 population, incidence of problems with such travel arrangements and incidence of costs associated with those problems. Costs were considered both gross and net (after eventual compensation was received).

Our methodological approach did not directly seek to calculate similar incidences and costs for other types of travel arrangements. It does not, therefore, provide the same level of statistical significance for the comparison of consumer detriment in dynamic and traditional travel packages. However, we had enough responses overall to conclude that gross personal detriment in traditional packages, at an estimated €159 million, is considerably below that in dynamic packages (€1,065 million). The difference is likely to be even larger for net personal detriment given that consumers are more likely to receive compensation for problems with their travel when using traditional packages than when doing other type of travel arrangements.

Our analysis of structural detriment looked not at problems for individual travellers but at the possibility of the market getting to the 'wrong' equilibrium, where prices and quantities transacted are suboptimal for consumers. We did not make a numerical estimate of this effect because of the very large number of assumptions that we would have to make in order to reach such an estimate. However, given that a large fraction of consumers in our survey were uninformed about the differing levels of consumer protection offered by different travel arrangements, and given the large and growing size of dynamic packages within the overall travel services market, the value of structural detriment is likely to be significant. Because some consumers are unaware of the low level of protection, they put a value on the purchase that is higher than their actual valuation and therefore over-purchase dynamic travel. For these consumers, the price paid plus the expectation of (uncompensated) loss is higher than their valuation. This is the way in which we define and calculate structural detriment – by aggregating expected losses over all consumers with a negative surplus.

In our study, therefore, structural detriment is a sub-set of personal detriment. It corresponds to that part of personal injury and costs that is incurred but that is not compensated by lower prices.[3] For personal detriment, we include all personal injury and costs incurred by dynamic package travellers.

Which of the two measures is best is a difficult question to answer. Personal detriment estimates the value of harm actually suffered by consumers. It is therefore indubitably a measure of great relevance for consumer policy. Structural detriment is a measure of how the particular issue under study results in sub-optimal market outcomes and thus perhaps a more adequate measure from the perspective of a potential regulatory intervention.

[3] Lower prices would be expected for packages offering lower consumer protection because sellers of these packages save on costs. However, the extent to which cost savings are reflected in lower prices depends on how competitive these markets are. The present study did not seek to make a competition assessment.

1 Study objectives and background

The context for this study is an increasing trend, in some Member States, for consumers to put together their own holiday components from different organisers (so called dynamic packaging), instead of opting for packages pre-arranged by an organiser or a retailer. Section 1.2 defines dynamic packages for the purpose of this study.

Council Directive 90/314/EEC of 13 June 1990 on package travel, package holidays and package tours (henceforth, the Directive) was designed prior to some of these developments and its application to some of the travel arrangements now commonly made by many EU travellers is unclear. Often it may not be clear to consumers that different protection levels will apply to travel arrangements that are sold differently but which at the same time might be undistinguishable to consumers. This uncertainty and possibly divergent interpretations and implementations of the Directive by the Member States may affect competition and consumer protection.

Against this background, the aim of this study is to estimate the level of consumer detriment in the travel sector in the area of dynamic packages.

The geographical scope of the study, as per the terms of reference, is as representative a sample of the Member States of the European Union as possible (given cost effectiveness considerations), including both Member States with a long tradition of sales of package tours and Member States where leisure travelling has evolved more significantly during recent years.

In terms of product, the research shall cover travel packages put together at the request of the consumer, also sometimes referred to as 'dynamic packages'. As such, this study does not focus on situations where travel services are pre-packaged and offered and sold at an inclusive price. This last group is often referred to as 'traditional travel packages'.

The focus of the study also explicitly excludes genuinely separate bookings where a consumer buys different components from different sellers/websites that are not linked or co-branded. These will be referred to as 'independent travel arrangements'.

Whereas all traditional travel packages are within the current scope of the Directive, there is some uncertainty about the coverage of dynamic packages. A recent judgment of the European Court on the matter, the 'Club tour' case (ECJ c400/00), extended the scope of the Directive to also include combinations of tourist services put together at the moment the contract is concluded between the retailer and the consumer.

1.1 Background

This section describes the context and the background for this study. It seems clear that the interest in consumer detriment in relation to package travel and in particular dynamic packages is related to calls for clarification of the scope of the Package Travel Directive (Directive 90/314/EEC). Therefore, we start by describing the Directive. With the contents of the Directive in mind we describe the market for package travel.

1.1.1 The Package Travel Directive

Broadly stated, the Directive regulates the liability and minimum information requirements of organisers and retailers of travel packages.

Organisers and retailers are liable for the performance of the services offered with some exceptions, e.g. cases of "force majeure". Even in such cases the organiser must do all he can to assist and inform holiday makers.

The Directive requires that certain information be provided to the consumer in brochures which are made available, in the pre-contract stage, in the contract or simply 'in good time' before the journey begins.

Finally the Directive contains requirements for the security to be provided by organisers to cover repayment of the price and repatriation of consumers in the event of insolvency.

The Directive has been adopted in all member states and is a minimum harmonisation directive. Hence, some Member States have adopted national provisions that extend the level of consumer protection provided by the Directive.

1.2 Definition of travel package

The Directive is related only to organisers and retailers of package travel, package holidays and package tours. To define the scope of the Directive, a definition of "package" is provided.

Currently a package is legally defined as a "pre-arranged combination of not fewer than two of the following components sold or offered for sale at an inclusive price and when the service covers a period of more than twenty-four hours or includes overnight accommodation:

a) transport;

b) accommodation;

c) other tourist services not ancillary to transport or accommodation and accounting for a significant proportion of the package."

The Directive also states that the separate billing of various components of the same package shall not absolve the organiser or retailer from the obligations related to sale of package holidays. Further, the judgement of the European Court in the 'Club tour' case (ECJ c400/00) implies that holidays organised by travel agents at the request of and in accordance with the specifications of a consumer or limited group of consumers is considered a 'package' and that combinations of tourist services put together at the time when contract between the travel agency and the consumer is concluded is considered a pre-arranged combination. The judgement implies that some dynamic packages organised by travel agents are covered by the directive. Although the judgement related only to travel agents, the principles could be extended more broadly to online sellers of holidays and some dynamic packages purchased online would therefore also be covered by the directive.

1.2.1 Market definition and structure

Traditionally the organisers of holidays were tour operators who grouped tourist services together in a package and offered it for sale either directly or through a retailer. Further traditionally retailers were travel agents who would sell packages put together by the organiser.

However, recently this clear distinction has become somewhat blurred because consumers increasingly seek personalised holidays[4] put together for them by the travel agent, the tour operator, online travel sites or the holiday-makers themselves. According to the survey on the attitudes of Europeans towards tourism, 56%of the EU citizens organise their holidays themselves, rather than purchase a pre-defined package. [5] At the same time other players in the travel industry such as airlines have entered the market for package holidays either as organisers, retailers or by providing links to other tourist services making it easier for consumers to put together the package themselves.

One of the key drivers of this shift in the structure of the market for package holidays is the dramatic increase in electronic sales. In 2008, 42% of consumers purchased travel services over the internet.[6] The internet has made it possible for consumers to get information about the market without having to use intermediaries and it has made it easier for consumers to shop around and compare market offers. This and the entry of low cost airlines have increased competition in the market and have made holidays more affordable.

[4] Martin (2004).

[5] Flash Eurobarometer 258, http://ec.europa.eu/public_opinion/flash/fl_258_en.pdf

[6] Percentage of individuals who ordered goods or services, over the Internet, for private use, in the last year, data from Eurostat, Information society statistics (2009).

Further, with this method of sale has come a change in the types of holiday arrangements available to consumers, and this has made it easier for consumers to make their own arrangements through websites of airlines, hotels, rail, travel agents, tour organisers etc.

Certain internet travel agencies enable holiday-makers to purchase accommodation from one source and flights from another putting together their own so called dynamic package. Two cases are particularly frequent,

- the consumer, on one and the same website, chooses separate travel components which are priced separately and pays for all selected components in one go; the consumer may believe he is buying a package.
- the consumer buys one component, e.g. the flight, from one website and then clicks on a hyperlink which links it to the site of an associated company, offering for instance accommodation or rental cars. The suppliers are then two separate entities, but the consumer may think he is buying one package.

These new forms of travel arrangement can create problems for consumers because it is in some cases unclear whether consumers are protected by the Directive when purchasing such packages. In particular, of the two examples above, the first appears to be covered by the Directive while the second does not.

The possibility that consumers are unprotected and their eventual lack of information as to whether they are protected may contribute to raise consumer detriment in the package travel sector.

1.3 Dynamic travel package

The Directive defines a travel 'package' but its scope is unclear in relation to an increasingly common category of travel arrangements that has become known as 'Dynamic Travel Packages'. There is no universally recognised definition for dynamic travel packages. They are different from 'traditional' travel packages because they imply a greater level of customisation, often being entirely put together by the buyer and sometimes purchased from different sellers.

For the purpose of this study, we required a workable definition of dynamic travel package, on the basis of which to construct the necessary survey questions to identify respondents who had and who had not made travel arrangements of this type. This is outlined below.

Definition: A dynamic travel package is characterised by two elements:

3. It is a package i.e.

- it includes two or more elements that are not insignificant relative to the total value of the package (e.g. flight, accommodation and car rental);
- the suppliers of these different elements are commercially linked; and
- the elements are bought at the same time.

4. It is dynamic i.e.

- it is put together by the consumer, who decides which elements to add and which to exclude;
- it allows a significant degree of tailoring by the consumer

We broadly used this approach to define dynamic travel package to survey respondents (see exact definition used in the survey in section 4.4).

1.4 Organisation of this report

In the next section we provide a methodological overview of the approach to estimate consumer detriment in the context of dynamic travel packages. We consider two different types of consumer detriment: personal detriment and structural detriment. This is followed by a section describing the sources of detriment that we have identified.

The main body of the report deals with the design of the consumer survey and with the results of the consumer survey and their application to the estimation of personal detriment.

Next, we make an analysis of structural detriment.

The final section provides a discussion of the strengths and weaknesses of this particular methodological approach for estimation of consumer detriment and offers some conclusions.

2 Overview of methodologies to assess consumer detriment

2.1 Definition and types of consumer detriment

Consumer detriment can be defined as harm or damage to consumers that occurs in connection with a transaction between the consumer and particular sellers or suppliers. Consumer detriment and can be classified as either personal or structural detriment.[7]

Personal detriment is detriment for individual consumers when their actual experiences fall below what they could have reasonably expected. Personal consumer detriment can be broken up into financial and non-financial detriment. Financial detriment could include costs of repair or replacement, lost earnings, cost of legal advice etc. Non financial detriment could include loss of time, adverse effects on health and psychological detriment arising from for example emotions such as anger and frustration. On some elements of non-financial personal detriment it is possible to put a monetary value (value of time, long-term health effects), on others this is very difficult to do (most aspects of psychological detriment).

Structural detriment is loss of consumer welfare at an aggregate level due to market or regulatory failures. For instance, structural detriment can arise from market failures such as informational asymmetries; market power; externalities; or public goods. Structural detriment could also arise from regulatory failures as a result of price and quantity interventions; trade restrictions; cost increases; or acts of omission in regulation.

2.2 Methodology for assessing personal consumer detriment

There are two main ways of gathering information in order to estimate personal detriment: data on consumer complaints and consumer surveys. We discuss each in turn.

[7] EC DG SANCO (2007) "An analysis of the issue of consumer detriment and the most appropriate methodologies to estimate it", Report by Europe Economics, available at , http://ec.europa.eu/consumers/strategy/docs/study_consumer_detriment.pdf

2.2.1 Consumer complaints

A measure of consumer detriment could be the number of complaints. However, as mentioned in the European Commission handbook "Assessing the impact of policy on consumer detriment", there are a number of reasons why complaints numbers might not accurately reflect consumer detriment.

Firstly, consumers do not always complain when they experience a problem and consequently experience personal detriment. To complicate matters the likelihood of complaining varies between different groups of consumers and products. According, to the UK Office of Fair Trading consumers are more likely to complain if the value of the product is high and if the problem is related to insurance, personal banking, internet facilities or domestic fuel.[8] In addition, consumer complaint propensity seems to be a function of how often the product is used, how much the consumer depends on the products, the age of the product and the age of the product as a generic class.[9] When assessing the magnitude of the detriment using complaints data it is necessary to take the likelihood of complaining into account and acknowledge that non-complaining consumers also might have experienced consumer detriment.

Secondly, complaints can be either informal or formal and they can be directed either directly to the trader or agent or to public bodies or consumer organizations. Research suggests that in the first two attempts by the consumer to resolve the problem were directed towards the retailer and in subsequent complaint attempts consumer agencies and manufacturers.[10] Therefore, when using complaints numbers it is important to acknowledge that complaints data from the traders themselves do not necessarily include informal complaints and complaints to public bodies may only be a sub-sample of the total number of formal and informal complaints made by consumers to traders.

Thirdly, differences in the number of complaints over time and across sectors do not necessarily reflect differences in personal detriment; it could instead reflect differences in consumer awareness and confidence in relation to seeking redress. Consumers seeking redress have some likelihood of being fully or partly compensated for the detriment they experienced. However, non-complaining consumers who have experienced consumer detriment have no possibility to achieve compensation and therefore personal detriment may be high even though the number of complaints is relatively low.

Finally, consumer complaints data provides very little information about the severity of the problems and therefore gives only limited data which can be used to quantify the level of consumer detriment.

---

[8] Office of Fair Trading, 'Consumer detriment', 2008

[9] Thomas et al (1979) analyse complaints related to durable goods in the US.

[10] Ibid.

2.2.2 Consumer surveys

Another and arguably better way to estimate consumer detriment is to conduct consumer surveys. This was the approach adopted by the UK Office of Fair Trading in 2000 and 2008 when trying to estimate the level of consumer detriment in the UK economy. General consumer surveys can be complemented by in-depth consumer interviews as was the case in the Office of Fair Trading studies. Such in-depth interviews can help to improve understanding of consumer behaviour and detriment.

A survey can give insight both into the incidence of problems and into the magnitude of personal detriment suffered for different types of products.

Recommendations in the European Commission handbook "Assessing the impact of policy on consumer detriment" suggest that by using general consumer surveys and not consumer complaints data from public bodies we can avoid most of the drawbacks identified in relation to consumer complaints data. Particularly given the purpose of this study and the intended coverage, a consumer survey is a clearly preferable methodology.

However, the Office of Fair Trading suggests that at least one problem is not overcome by the use of consumer surveys, namely, the problem of how to measure hidden consumer detriment. Hidden consumer detriment is detriment which consumers are unaware of and therefore do not report in consumer surveys. Hidden detriment is, however, likely to be very similar to structural detriment which is relatively hidden in its nature because it is not necessarily associated with specific problems but instead affects consumers more generally through market or regulatory failures. We therefore expect to be able to capture hidden detriment at least partly in our estimates of structural detriment.

In this respect it is important to emphasise that personal and structural detriment may in fact be partly overlapping because people who experience personal detriment may only do so because there is structural detriment in the market. Therefore, in any estimation of consumer detriment one must be careful not to be double-counting consumer detriment by simply adding personal and structural detriment.

2.3 Methodology for assessing structural consumer detriment

Structural detriment considers consumers in aggregate and is based on the outcomes for consumers due to inadequate functioning of the market. In order to estimate the level of structural detriment in a given market we need to compare current market outcomes with outcomes that would have occurred in the absence of the sources of detriment that have been identified. There is no perfect candidate to use as the

counterfactual for structural detriment but possibilities include perfect competition or "well-functioning markets" (which is more realistic but less easy to define).[11]

Economists typically measure consumer welfare using the concept of consumer surplus, which is the difference between what a consumer is willing to pay for a product and what he actually has to pay. A market that functions imperfectly will generally result in lower levels of consumer surplus.

The European Commission handbook on how to estimate the impact of policy on consumer detriment suggests that structural detriment should be estimated as changes in consumer surplus arising from the policy.

In our case we do not attempt to estimate the impact of a policy change but focus instead on estimating the current level of consumer detriment. For this purpose it is appropriate to consider the loss in consumer surplus arising because of market and/or regulatory failures, in relation to what the situation might be in the counterfactual where the market functions well. Conceptually, this could be interpreted as a comparison with market outcomes resulting from a policy intervention that removed the sources of detriment identified.

2.3.1 Proposed counterfactual

The main structural problem that we consider in this report is the co-existence in the marketplace of different types of travel arrangements from which consumers can choose but which afford consumers different levels of protection 'when something goes wrong'. Crucially, at the time of purchase, consumers are inadequately informed about the actual level of protection associated with a particular type of travel arrangement. Since protection has value for consumers (as the existence of a market for travel insurance attests), this lack of information implies that consumers can make sub-optimal choices among different travel arrangements. This reduces individual consumer surplus and distorts the competition among suppliers of travel services with different levels of protection.

As such, it seems appropriate to take as the counterfactual an alternative situation where all consumers are perfectly informed about the level of protection afforded by all the different travel arrangements that they can make.

This hypothetical counterfactual is very unlikely ever to be achieved even with a policy that mandated that this information be provided to all consumers at point of purchase. Research has, for example, demonstrated that consumers often do not read

[11] EC DG SANCO (2007) "An analysis of the issue of consumer detriment and the most appropriate methodologies to estimate it", Report by Europe Economics, available at , http://ec.europa.eu/consumers/strategy/docs/study_consumer_detriment.pdf

information on terms and conditions or even that they could fail to fully understand terms and conditions even if they read them.[12]

An alternative counterfactual is one where all travel arrangements offer exactly the same level of protection. Regulation could mandate, for example, that all providers of travel services participate in schemes that guarantee compensation or payment to buyers in the event of a provider's bankruptcy.

This alternative is somewhat harder to assess because it will involve a change in the cost structure of the side of the market that currently does not offer this type of protection.

For the present report we are going to choose the first of these alternatives. We believe this is the one that implies the smallest difference in terms of market structure relative to the present situation.

In summary, therefore, we make our assessment of structural detriment in this market in terms of the comparison of estimated consumer surplus under the current situation and under the following counterfactual:

Counterfactual: *all consumers are perfectly informed about the level of protection afforded by all the different travel arrangements that they can choose from*

[12] See, for example, "Consumer Information and Regulation", Report prepared by Vanilla Research for the Better Regulation Executive And the National Consumer Council (NCC), July 2007. Last accessed on 12Nov09 from http://www.berr.gov.uk/files/file44592.pdf.

3 Current situation in the market

3.1 Sources of personal detriment

This section gives a short description of the sources of consumer detriment which are relevant in relation to travel packages.

Consumers who have experienced problems with packages or dynamic packages will potentially have experienced personal detriment at different levels.

It is possible, as well, that consumers who had problems with their travel arrangements complained and sought redress. These actions will generally entail a certain amount of cost (correspondence, time spent) but are also likely to result in at least some compensation. The net detriment for consumers who suffered problems therefore has to take into account the value of compensation received.

Table 1 describes the sources of personal detriment in the two cases. Clearly some of the sources are overlapping and therefore it is necessary to take steps to ensure that we do not double-count in our estimation of the level.

Table 1: Sources of personal detriment			
Source	**Description**	**Consumers that sought redress**	**Consumers that have not sought redress**
Replacement costs	Includes costs incurred to replace services that were not offered or were of a lesser content/quality than anticipated. It also includes costs if final disbursements are larger than consumers had been led to expect.	yes	yes
Costs associated with solving the problem	Includes travel and administrative costs associated with making complaints in person or in writing.	yes	no
Reduction in the value of the purchased package	The value of the holiday may have been reduced if, for instance, consumers had to go to hospital during the holiday or if a flight delay shortened the trip.	yes	yes
Cost of seeking advice	Includes cost of legal advice	possibly	no
Lost earnings	This includes loss of time from work due to cancelled or delayed return flights. It could also include lost earning because of injury or adverse health effects.	yes	yes
Psychological detriment	Includes emotional distress from frustration, anger, stress etc.	yes	yes
Injury and adverse health effects	If the problem is a health and safety related issue the problem could have caused injury or had adverse health effects.	possibly	possibly
Lost time	Time spent seeking redress or finding replacement services.	yes	maybe but lower than if redress sought

3.2 Sources of structural detriment

An analysis of the sources of structural detriment should consider two categories: market failures and regulatory failures.[13] We discuss some aspects of structural detriment under each of these headings below.

In addition to discussing the sources of structural detriment we also remark on the extent to which they seem to be attributable to the situation created by the asymmetry of consumer protection requirements imposed on the different market segments.

3.2.1 Market failures

Market power

Traditional travel package operators make a product offering that attracts a big share of the consumer travel market. The largest of these operators are recognised by their brand name and by their reputation. There are certain barriers to entry into this market segment because tour operators need certain critical mass of customers in order to be able to offer attractive pricing on destinations that also offer some degree of security to travellers.

If barriers to entry are important and give these operators enough market power to raise prices and offer less variety and/or lower quality of services, this is in itself a source of structural consumer detriment, which however cannot be attributed neither directly nor entirely to the consumer protection requirements included in the Directive.

However, the Directive, by making explicit the level of protection that package operators are required to offer to travellers, adds one cost layer to the 'production function' of package travel and thus raises entry barriers further.

The existence of alternative providers of travel services counteracts the effect of high barriers to entry to travel package supply and lowers these suppliers' market power.

In this sense, the entry upon this market of the dynamic travel arrangement may have brought great benefits to consumers. By offering an attractive alternative to the traditional package, these new entrants also minimise the degree to which traditional travel package suppliers can exercise market power. This competition should thus be expected to result in lower prices for consumers and correspondingly higher consumer surplus.

[13] Handbook for the European Commission "Assessing the impact of policy on consumer detriment".

Informational problems

The market failures in the market for package travel of primary concern for the purpose of this study are those related to informational asymmetries.

Consumers in this market may have little information about certain product attributes. This may be true in many dimensions but of main concern for the purpose of the study is the incompleteness of information in relation to consumer protection offered by suppliers in the event that the holiday-maker encounters problems with some elements of the package.

Most buyers will feel daunted by the amount of information that the purchase would ideally require and it is generally acknowledged that consumers rarely read contract terms and if they do, they often do not fully understand the implications. According to Becher (2007), these properties of standard consumer contracts cause important informational asymmetries which may be exploited strategically by sellers. In particular, sellers may have little incentive to offer product characteristics that are valued by consumers but that consumers are unable to verify at the time of buying. Sellers may try to make their products appear to have such desirable features when in fact they do not.

The Travel Package Directive itself introduces, potentially, an additional layer of information asymmetry. Traditional packages are protected by the Directive whereas certain dynamic packages are not.

Consumers who buy separate components of a same trip through separate suppliers are most likely not protected by the Directive, even if the purchases all take place almost simultaneously and from linked websites, for example. This fact may not be apparent to consumers and, at the moment of purchase, they may expect a level of protection that they actually will not be entitled to. Redraft- not clear, what omission?, use hypothetical phrases e.g, instead of "is".

As a result, consumers may overpay for dynamic packages (that are outside the scope of the Directive) when compared to what they would have paid for a traditional package and dynamic package sellers can take advantage of this and increase prices for consumers unreasonably.

Impact on cross border competition

One of the motivations behind the package travel Directive was to harmonise the way in which holiday protection is offered across the different Member States. By doing so, the Commission aimed to encourage cross border trade in travel services and enhance competition among providers in different countries.

In the event, the Directive was introduced as a minimum harmonisation directive, and, as such, it sets a threshold which national legislation must meet. However, national law may exceed the terms of the legislation if desired and this has happened in a few Members States causing different rules to co-exist in the internal market. As

a result, there are discrepancies across the Member States in the way in which it is applied and its existence does not appear to have facilitated cross border transactions in this sector.

3.2.2 Regulatory failures

Cost increase

Regulatory intervention can itself result in consumer detriment. For example a ban on selling some types of products may result in detriment for those who would have wished to buy them.

In relation, to the market for package holidays the Directive imposes that the organiser/retailer should provide sufficient evidence of security for the consumer. This may signify additional costs for these suppliers and these costs will inevitably raise prices for consumers. It is possible that at least some consumers would have preferred to take more risk in exchange for a cheaper price for the package. The regulatory intervention can impose costs on businesses to achieve a particular positive outcome for consumers but the value of the positive outcome for consumers has to be considered 'net' of the costs imposed on businesses.

Product characteristics and product variety

The Directive may have an impact on the type of products that are being offered to consumers. For example, the Directive prevents sellers from offering package travel without a certain level of protection. This may imply that certain travel destinations are not offered at all or at least not offered in a package. This may result in sub-optimal product variety.

The fact that a form of consumer protection is offered as an intrinsic part of the travel package may result in little awareness on the part of consumers of the different levels and types of protection that they could choose to purchase. Perhaps consumers would value being offered a menu of possible protection schemes additions to their travel arrangements rather than a pre-determined level, which may be excessive for some consumers.

3.2.3 Effect of current market structure on consumer and business behaviour

These sources of structural detriment impact general consumer and business behaviour. Two main behavioural effects can be identified: distorted purchasing decisions and distorted competition.

Distorted purchasing decisions

Informational asymmetries can result in a purchase that should not have been made at all or that was made from a seller which would not have been the seller of choice if the buyer had been fully aware of the quality of the goods services and relevant contractual conditions offered by all competitors. Hence, informational asymmetries can distort purchasing decisions.

Similarly, regulatory omissions can lead to sub-optimal purchasing decisions because it is not clear to consumers whether the holiday they have purchased is a package protected by the Directive.

Finally, the fact that some sellers of holidays are forced to include a certain level of consumer protection in their offerings could imply that some consumers ultimately pay for this protection although they would have been happy to take the risk of the holiday not working out exactly as planned in exchange for a lower price. In this case regulation could distort consumer purchasing decisions.

Currently consumers who do not want to pay a possible premium for this protection can instead purchase dynamic packages that are not governed by the Directive.

Distorted competition

Individual sellers may exploit informational asymmetries and offer products and services of lesser quality than would otherwise have been possible.[14] Antitrust experts have argued that consumer protection violations such as asymmetric information can give rise to market power because consumers are unable to asses the relative quality of different price-quality offerings. Although there is competition in the market, competitors will not be able to push out inefficient price-quality offerings because consumers can not evaluate quality. This could imply that the offers that are available for consumers to choose from in general become sub-optimal. This can be reflected in lack of variety, lack of adequate insurance offerings, for example.

Further, since traditional packages, dynamic travel packages and stand-alone holiday components are not regulated in the same way but compete for the same consumers, those regulated by the Directive could be disadvantaged by the costs of adhering with the Directive. This could imply that demand for traditional packages falls because consumers are unable to acknowledge the differences in liability and financial protection.

[14] Lande (2007).

3.2.4 The presence of alternatives enhances competition

We consider next some arguments suggesting that the availability of alternative travel arrangements brings value to the market through increased completion, and more consumer choice.

It is however difficult to determine the linkage between the existence of these alternatives and the fact that they are not under the obligation to offer the same level of protection as traditional travel package suppliers.

Not offering protection, combined with consumer unawareness about differing levels of protection may have contributed to facilitate entry by the providers of these other forms of travel arrangements. In that sense, the present situation may have contributed to enhancing competition in the market which, by lowering prices and increasing variety, may have resulted in significant consumer surplus gains.

We should be careful, however, not to attribute the entry in the market of this new type of operators to the same causes as those we are using to assess consumer detriment.

These entrants have certainly brought value to consumers (as evidenced by the large number of consumers now choosing to organise their holidays in this way) but their ability to enter was most of all driven by the rapid expansion in internet and particularly broadband penetration across most European countries.

Competition in the travel market

A key relationship in the holiday industry is that between those who supply the "holiday" package and those who retail these holidays. The supplier, or tour operator, puts together the holiday package by negotiating with destinations and operators in third countries.

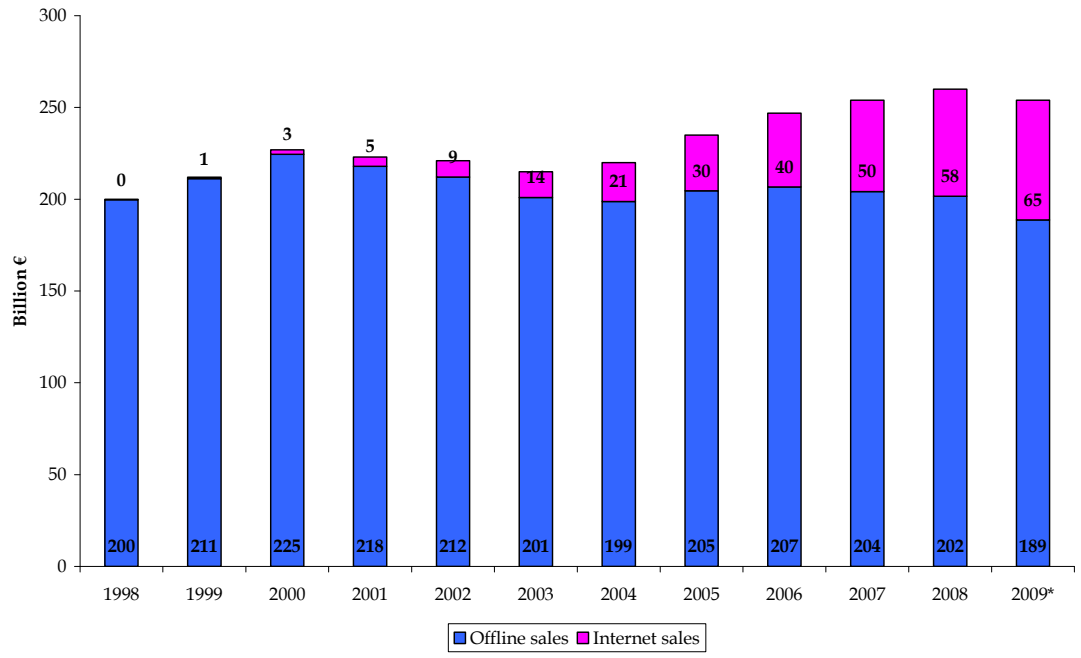
The tour operator market is characterised, at least in some countries, by a large number of small players and a few very large players with relatively large market shares. This may affect the extent to which larger operators face effective competition in the marketplace.

At the next level, the travel agent acts as a broker and retailer of holidays to the consumer. In the role of broker, the travel agent is, in principle, independent of the tour operator. However, this is often not the case. In the United Kingdom for example, only one third of travel agents are independent and two thirds are tied to a tour operator.[15]

[15] http://www.unctad.org/en/docs/poitcdclpm13.en.pdf, page 4.

In recent years, as the access to the internet and the use of the internet for holiday bookings have increased, travellers can access a vast new array of retailers at very little cost. The growing importance of online sales in the travel market is illustrated by Figure 1. From 2003-2008 offline sales accounted for approximately €200 billion with growth in the travel market almost entirely being due to growth in online sales. Furthermore, online sales are projected to increase by 12% in 2009 despite a projected reduction in the total value of the market. Consequently, online sales are projected to account for 25% of the travel market in 2009, compared to 22.5% in 2008.

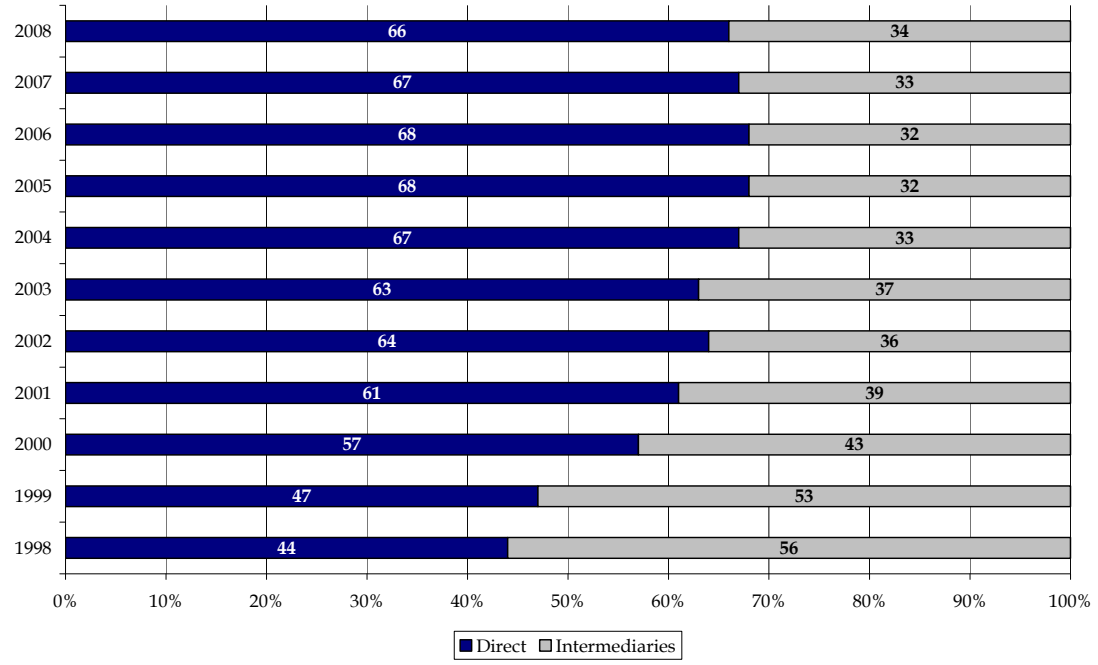
Figure 1: Value of travel market



Note: Includes EU27 and EFTA3, 2009 is a projection.
Source: Marcussen, C.H. (2009), Centre for Regional and Tourism Research, www.crt.dk/trends, 23. March 2009.

This trend, which makes the market less manageable for travel agents and tour operators, does offer 'destinations' opportunities to bypass tour operators to reach into the decision-making process through use of new media. There is evidence that a decreasing share of online sales is through intermediaries and increasing direct sales. In particular, 44% of online sales were direct sales in 1998 but this figure had risen to 66% (Figure 2).

Figure 2: Travel market sales channel



Source: Marcussen, C.H. (2009), Centre for Regional and Tourism Research, www.crt.dk/trends, 23. March 2009.

Tour operators' buyer power

Tour operators with market power in their downstream markets may in turn have the ability to extract low prices for the tourism services that they procure from the different destinations. This can be harmful for service providers at those destinations and decrease the quality and variety of services available to travellers to those destinations.

Consumers have different preferences

One thing that has to be remembered is that there is no such thing as an average consumer of tourism services. There are many different types of consumer with differing preferences and needs and differing levels of incentive to research new destinations and make their own travel arrangements. In addition, individual consumers can have different patterns of demand at different times of the year and throughout their lifetime.

A market that is very concentrated at the tour operator level is unlikely to deliver adequate levels of travel services variety to consumers. Tour operators benefit from having a lot of travellers taking the same type of holidays.

The possibility of consumers constructing their own travel packages allows them much greater flexibility and to better tailor the holiday to their preferences.[16]

[16] Evidence of this type of preferences was patent in the survey results where a large percentage of respondents choose exactly that as the main reason to make 'dynamic packaging' of their travel arrangements.

4 Design of the consumer survey

The key part of the estimation of the level of personal detriment in relation to package holidays in the EU is to conduct a survey of a representative sample of the population having used in the recent past the services of the package travel industry.

4.1 Sampling

The survey was undertaken in 17 countries and for each country the sample size was at least 500 completed questionnaires of representative respondents aged 16 or above who had been on dynamic package holidays within the last 2 years. The 17 countries included in the survey are the UK, Greece, Finland, Sweden, Denmark, Ireland, Netherlands, France, Germany, Austria, Spain, Italy, Poland, Czech Republic, Hungary, Slovenia, and Bulgaria.

This provides, in our view, a good coverage of all the larger Member States as well as the Scandinavian, the Southern and the Eastern European markets. Three main criteria influenced our choice of target countries.

The first is a measure of how important the travel sector is for residents of each country. We proxy this by looking at the number of holidays longer than one-night stay taken by residents per year. The second is an indication of expenditure by residents specifically on the travel package sector. The final one is a measure of internet usage which we believe may have a significant influence on how likely consumers are to resort to dynamic travel packages instead of the more traditional off-the-shelf type.

The scores of the Member States in relation to each of these are summarised in the table below.

Table 2: Holidays per 1,000 households and access to broadband service in the Member States

Country	Number of holiday trips (one night or longer) per 1,000 residents, 2006	Expenditure on package holidays per 1,000 residents, 2007	Percentage of the population with broadband access, 2008	Propose to include in the sample
BE	94	174	**56**	
BG			21	YES
CZ	**261**	134	36	YES
DK	196	**367**	**74**	YES
DE	186	185	**55**	YES
EE	64	78	**54**	

IE	**233**	**420**	43	YES
EL	143	22	22	YES
ES	**276**	79	45	YES
FR	**299**	124	**57**	YES
IT	133		31	YES
CY		132	33	
LV	**205**	39	40	
LT	102	54	43	
LU	**234**	**361**	**61**	
HU	**245**	39	42	YES
MT			**55**	
NL	173	**233**	**74**	YES
AT	191	**217**	**54**	YES
PL	100	9	38	YES
PT	97	34	39	
RO	32		13	
SI	**238**	74	**50**	YES
SK	119	151	35	
FI	**536**	**220**	**66**	YES
SE			**71**	YES
UK	187	**258**	**62**	YES

4.2 Survey methodology

The consumer survey was carried out as telephone interviews. We believe that given the widespread extent of the population being targeted, a telephone survey is the most efficient and cost effective means to achieve representative results.

The survey was performed by professional interviewers and who were also native speakers of the language of each of the target countries.

4.3 Questionnaire development

The questionnaire developed was as short as possible while meeting the required level of information that need to be collected from respondents. Long questionnaires lead to questionnaire fatigue and result in lower reliability for the received replies.

Further, the questionnaire was written in simple and precise terms and the questions were framed in a context that is familiar to the respondent.

Questions included in the questionnaire will aim at providing information about:

- Demographic characteristics;
- Incidence of dynamic packages;
- Reasons for purchasing dynamic packages;
- Through which channels dynamic packages are purchased and details of the purchasing process;
- Incidence and nature of problems with dynamic packages;
- Complaint behaviour and success rates; and
- Costs associated with the problem.

4.4 Details of the survey process

For the consumer survey the aim was to get 500 completed surveys for each of the survey countries. The purpose of the questionnaire was to obtain information about the incidence of problems with dynamic packages and the size of the costs associated with the problems. Therefore, the individuals surveyed needed to have experiences with dynamic packages.

In particular, individuals who agreed to participate in the survey qualified to complete the survey:

- they were at least 16 years old; and
- had purchased a dynamic package within the last 2 years.

It was necessary to ensure that respondents understood what was meant by a dynamic package and therefore the following introduction to the survey was provided:

In this survey we wish to focus on 'dynamic package travel', which refers to purchasing two or more items or services for a single holiday trip such as flights, accommodation or car rental, **at the same time** and from the same supplier **or** from suppliers that are commercially linked, such as travel agents, airlines or holiday companies.

The following are not considered to be dynamic packages:

- Where flights only, hotel only, car rental only are booked
- Where each component has been booked through separate suppliers/channels chosen independently by the customer

- A traditional package holiday – Where all components are part of a prearranged package with a set price for the whole package and offered as such (i.e. the package has been assembled before being offered to the customer)

Immediately after this introduction had been provided, respondents were asked whether they had purchased any of the following types of dynamic packages within the last 2 years:

- Used a website to book one element of the trip (e.g. the flight) and then been redirected and booked another element through a partner website.
- Booked an airline/train or ferry ticket directly through an airline/train/ferry company and booked accommodation or car rental through the same source.
- Booked two or more components of your travel from the same seller or using a single website (such as Expedia or Lastminute) and had a choice whether to add or exclude additional elements from the trip.
- Booked two or more components of holiday from a high street travel agency and had a choice whether to add or exclude additional elements from the trip.
- Booked any other dynamic package (i.e. a package assembled by the customer and not on offer for a set price).

If respondents said that they had not purchased any of the above, the interview was ended.

4.5 Validation and ex-post stratification

In order to be able to generalise the survey results obtained in the sample to the population it is necessary to assess whether the sample obtained is representative of the population and whether respondents have understood the definition of dynamic packaging provided.

Survey results indicate that consumers are somewhat confused about the distinction between a traditional package, a dynamic package and independent travel arrangements[17]. Therefore, the estimates of the prevalence of dynamic packaging may be biased in either direction by the general confusion among respondents about what a dynamic package is.

We exclude from our analysis respondents who said that they had purchased a dynamic package but that the package had consisted of only one component. These

[17] This is despite the explanation of dynamic packaging provided in the introduction of the survey.

respondents seem to have misunderstood the concept of dynamic packages and packages as such. We refer to Annex 3 for details of the number of observations excluded.

Generalisation of the survey results is only appropriate if the sample obtained in each of the countries is representative of the entire population or if it is appropriate to assume that everyone aged 16 or above is equally likely to purchase a dynamic package. If the sample cannot be said to be representative of the age and gender structure of the population it may be appropriate to apply ex-post stratification for the following reasons:

- Dynamic packaging is often associated with internet use[18] and therefore purchases of dynamic packages are expected to be correlated with the use of internet. Further, the use of internet is negatively correlated with age (Figure 3) and as a result purchases of dynamic packages may also be negatively correlated with age.

  Therefore, if the age structure of the sample does not reflect the age structure of the population this will lead to biased results. If the above 60s are overrepresented in the sample we will tend to underestimate the incidence of purchase if no ex-post stratification is done and vice versa if the above 60s are underrepresented.

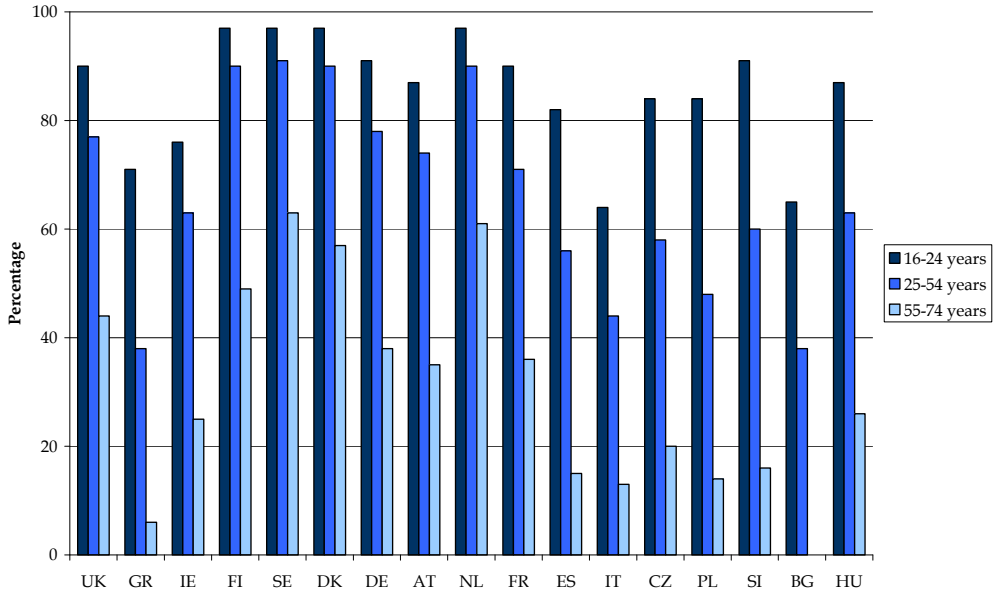
- Similarly, according to data from Eurostat, women are less frequent users of the internet in some of the sample countries (Figure 4). So if there is an overrepresentation of women in the country samples, we may underestimate the prevalence of dynamic packaging in these countries.

In fact, the sample obtained does not accurately fit the age and gender structure of the population (see Annex A2.1) and we apply frequency weighting in order to adjust the age and gender structure of the sample in each country to the corresponding age and gender structure of the populations. See Annex A2.2 for a detailed explanation of the ex-post stratification methodology.

In what follows we will refer to individuals who had purchased dynamic packages and completed the survey as respondents.

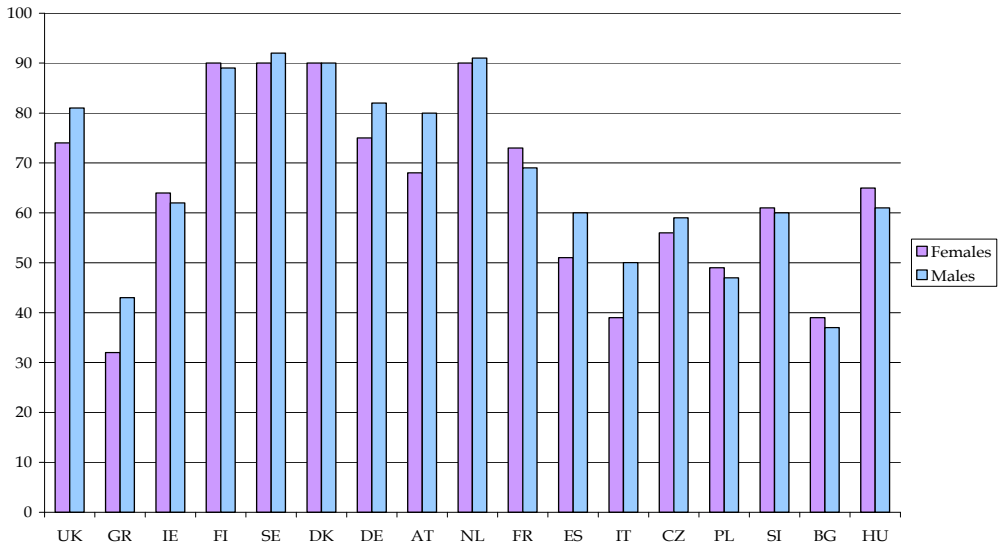
[18] On which we have specific survey information in a later section.

Figure 3: Percentage of individuals who access internet on average at least once a week in 2008 by age groups



Source: London Economics using data from Eurostat.

Figure 4: Percentage of individuals who access internet on average at least once a week in 2008 by gender



Note: Figures are for females and males aged 24-54 years.
Source: London Economics using data from Eurostat.

5 Estimation of personal detriment

This section presents the results of the consumer surveys conducted and based on the results we estimate personal detriment from dynamic packages in EU-27. In particular the section is structured as follows:

- Incidence of purchase of dynamic packages and incidence of use in the population;
- Dynamic package characteristics;
- Problems suffered and consequences;
- Perception of consumer protection;
- Comparison of problematic travel arrangements;
- Estimation of personal detriment for dynamic packages.

5.1 Incidence of purchase and use

In order to asses the prevalence of dynamic packages we use two different measures:

- the incidence of purchases among households within the last 2 years; and
- the incidence of use in the population within the last 2 years.

The former gives an indication of the number of transactions involving dynamic packages whereas the latter gives an indication of how many people have actually travelled using dynamic packages.

5.1.1 Overview of methodology

In this section we provide a short outline of the methodology applied when we calculate the incidence of purchase and the incidence of use. We refer to Annex 5 for further details.

Estimating the number of participating interviewees aged 16 or above

The first step towards estimating the share of households who purchased dynamic packages and the share of the population who have used dynamic packages is to estimate the total number of interviewees aged 16 or above who agreed to participate. The survey data does not contain this information because some interviews with individuals who agreed to participate concluded before the age was

recorded. We therefore need to adjust the total number of people who agreed to participate to take into account that some of these people were aged 15 or below.

Estimating the number of interviewees aged 16 or above who had purchased dynamic packages

The second step towards estimating the share of the population who have used dynamic packages is to estimate the number of interviewees above 15 years who had purchased a dynamic package[19]. Following the discussion of the problems related to understanding the definition of the concept of dynamic packages, we exclude respondents who appear to have misunderstood the concept of dynamic packaging from our estimate of the number or respondents aged 16 or above who had purchased a dynamic package.

Ex-post stratification

The third step is to take into account that the age and gender structure of the population does not exactly match that of the sample. We use ex-post stratification to adjust the sample characteristics to the characteristics of the population.

For each country we split the estimated number of participating interviewees aged above 15 into 20 groups (2 genders x 10 age groups) using estimates of the percentage of respondents in each of the groups in the total sample of interviewees.

Similarly we split the estimated number of interviewees above 15 who have purchased a dynamic package into the 20 age and gender groups using estimates of the percentage of completed and valid respondents in each group.

Estimating the incidence of purchase among households

For each of the 20 age-gender groups in each country we estimate the share of households which had purchased dynamic packages. It should be emphasized that the strategy for selecting the sample implied that each household would only be contacted once. Therefore we can use the following methodology to estimate incidence of purchase among households:

[19] Notice that the number of people who completed the interview is not identical to the number of people who said that they had bought a dynamic package. The reason is that some interviews with people who said they had purchased a dynamic package were concluded before the questionnaire was completed. When estimating the incidence of purchase among households, we would underestimate it if we based the estimate on the number of completed questionnaires in each country

Box 1: Incidence of purchase among households

Incidence of purchase among households =

Interviewees above 15 who purchased dynamic package / Participating interviewees above 15

Having calculated the share of households who had used dynamic packages in each age-gender group we calculate the incidence of purchase among households in each country as a weighted average of the estimated shares in the 20 age-gender groups. As weights we use the size of the population in each of the 20 age-gender groups.

To calculate the incidence of purchase among households for EU-17 we take a weighted average of the 17 country estimates, where we use total population size of the countries as weights.

Estimating the incidence of use in the population

Given the *incidence rates for purchase* of dynamic packages among households, we use the following methodology to calculate the *incidence of use* in the population of each of the survey countries.

Box 2: Incidence of use in population

Incidence of use in population =

Incidence of purchase among households / Average household size x Average number of people travelling as part of the package

By dividing the percentage of households which have purchased dynamic packages by the average household size, we get an estimate of the share of the population that has purchased dynamic packages.

Secondly, by multiplying this figure by the average number of people travelling together on dynamic package holidays we arrive at an estimate of the percentage of the population who have used dynamic packages within the last 2 years (Figure 6).

The figures for EU-17 are calculated as weighted averages of the 17 country estimates using the total population size of the countries as weights.

Level of accuracy

We calculated the level of accuracy for both the incidence of purchase and the incidence of use which depend on the number of respondents on the basis of which those percentages are calculated. This varies from country to country and the number used for the EU17 and EU27 averages is the sum of all individual country respondents. The detailed information is provided in the table below.

Table 3: Level of accuracy

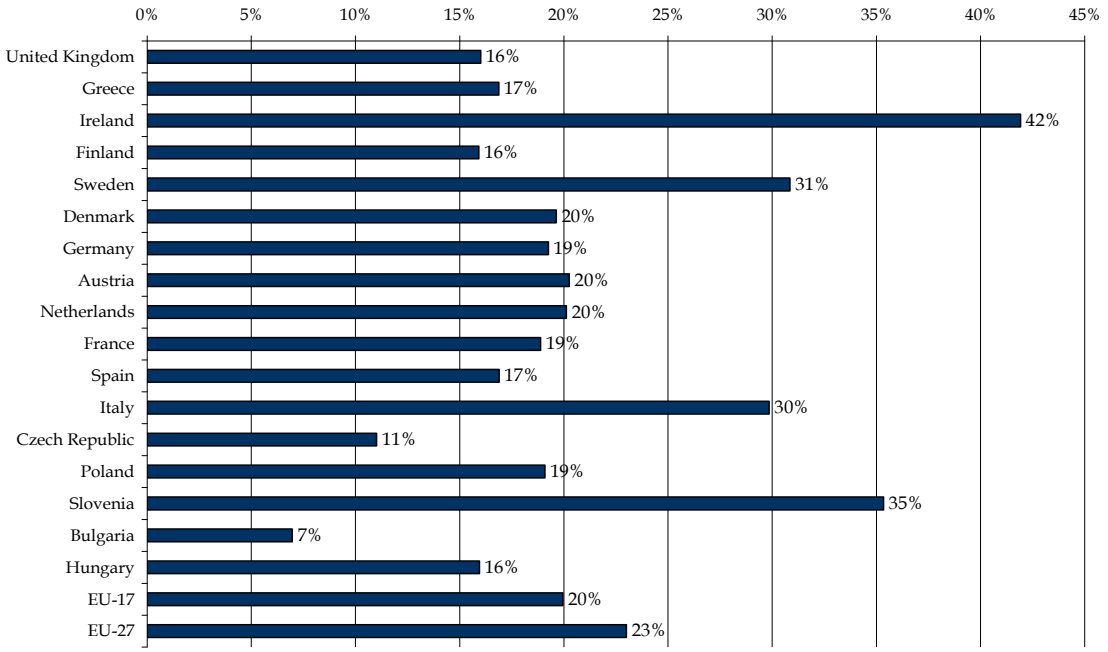
	Sampled	confidence (+ or -)
United Kingdom	2,736	1.9%
Greece	2,969	1.8%
Ireland	1,070	3.0%
Finland	2,896	1.8%
Sweden	1,879	2.3%
Denmark	2,246	2.1%
Germany	2,799	1.9%
Austria	2,791	1.9%
Netherlands	2,487	2.0%
France	2,600	1.9%
Spain	2,836	1.8%
Italy	1,981	2.2%
Czech Republic	4,411	1.5%
Poland	2,778	1.9%
Slovenia	1,438	2.6%
Bulgaria	7,812	1.1%
Hungary	4,654	1.4%
EU 17	**50,383**	**0.4%**
EU 27	**50,383**	**0.4%**

Note 1: The confidence interval is given by plus or minus the following number: (0.5*1.96)/sqrt(sample size)
Note 2: The sample for incidence calculations includes all respondents who agreed to take part even if they did not answer the survey due to screening out (for not travelling or for not using dynamic packages)
Source: London Economics

5.1.2 Incidence of purchase among households

On average in EU-17, we estimate that 20% of the households have purchased dynamic packages over the last 2 years and for EU-27 the figure is estimated at 23%. However, there are large cross-country differences in the share of households agreeing to participate who had purchased dynamic packages within the last 2 years (Figure 80).

Figure 5: Incidence of purchase of dynamic packages in households within the last 2 years



Note: EU-17 is calculated as a weighted average of the 17 countries. Population size is used as weights. The figure for EU-27 is extrapolated using the methodology described in Annex 9. The level of accuracy for these calculations is as provided in Table 3.
Source: London Economics based on survey data from Ipsos MORI and Eurostat data.

In most countries, 16-20% of the households are estimated to have purchased a dynamic package within the last 2 years. In comparison, more than 30% of the households are estimated to have purchased at least one dynamic package within the last 2 years in Ireland, Sweden, Slovenia and Italy. The high incidence rates in Ireland, Sweden, Italy and Slovenia do not necessarily represent outliers. Rather there may be country specific reasons why we observe this high incidence rates. A recent study for EC DG Enterprise and Industry concludes that differences in market structure often can be explained by differences in travel habits and traditions. For instance, as we discuss in detail in subsection 5.2.2 given the level of internet

penetration in Ireland, a relatively large share of purchases of dynamic packages are made using the internet. This could suggest that the Irish population is relatively likely to use the internet when making holiday arrangements and that this might be the reason why we observe such a high incidence of use in Ireland. It seems likely that part of this behaviour is driven by the fact that Ryanair is a key player in the Irish travel market and that the airline relies on online booking. This hypothesis is further supported by the finding that 87% if Irish dynamic packages include flights compared to 76% on average in EU-17.

Furthermore, in the case of Sweden, a recent Eurobarometer[20] finds that 88% of the Swedish population had travelled in 2008. This was higher than in any other country. In addition, 64% of the Swedish population had made more than one holiday trip in 2008, in this respect Sweden was second only to Luxembourg. This suggests that the high rates of purchase of dynamic packages among Swedish households might be explained by a high level of travel activity.

There seems to be a tendency that the incidence of purchase is lower among households in New Member States. This might be due to the fact that the level of GDP per capita is relatively low in these countries as is the level of internet penetration. Our finding that use of dynamic packages is lowest in Bulgaria which is also the least developed country in the sample seems well in line with this explanation. However, Slovenia is a clear exception from this tendency.

5.1.3 Incidence of use in the population

The incidence of use in the population can be interpreted as the share of the population who have had experiences with dynamic packages within the last 2 years.

These estimates are very similar to the estimates of the incidence of purchase because in many cases the holiday party and the size of the household are of similar magnitudes. Since the estimates are relatively similar the explanations of the cross country differences are also similar and we refer to the section above for a discussion of the explanations for cross country differences in the estimates.

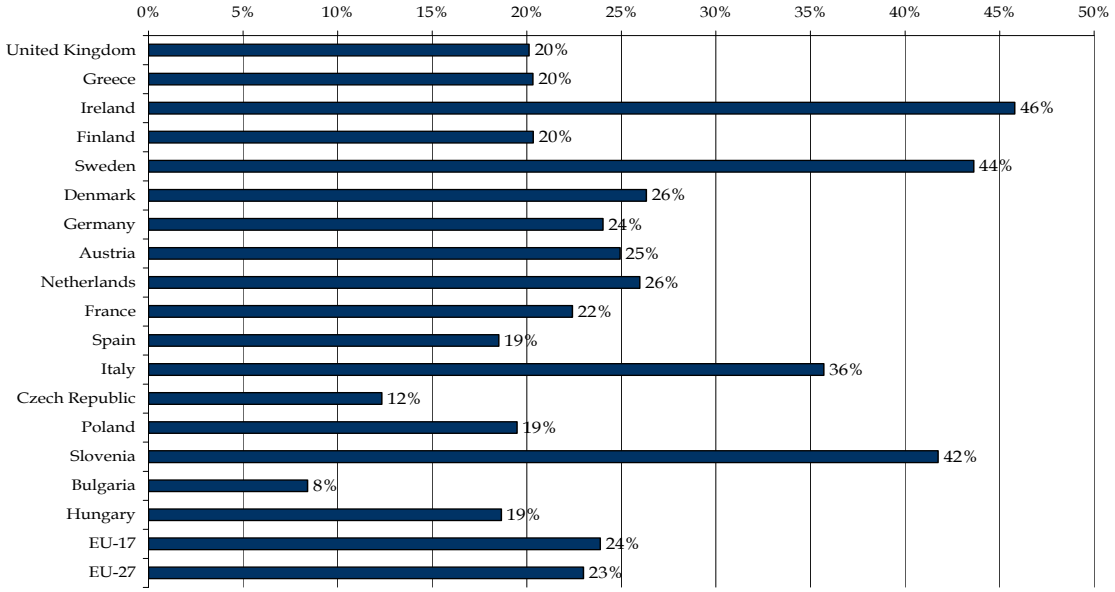
Although the estimates of incidence of purchase and incidence of use are quite similar, there is a tendency in most of the survey countries that holiday parties are relatively large (larger than the average household size). Therefore, in most cases our estimate of the incidence of use in the population is slightly higher than the incidence of purchase among households.

We estimate that, in EU-17, 24% of the population have used dynamic packages within the last 2 years and in EU-27, we estimate that 23% of the population have used dynamic packages. However, there are large cross-country differences For instance, incidence rates are very high in Italy, Ireland, Slovenia and Sweden where

[20] Eurobarometer (2009), "Survey on the attitudes of Europeans towards tourism", Flash Eurobarometer 258

more than 35% of the population is estimated to have used dynamic package at least one time within the last 2 years. In most other countries, 20-30% of the population is estimated to have used a dynamic package within the last 2 years. There seems to be a tendency that a lower share of the population in the New Member States had used dynamic packages. However, Slovenia is a clear exception from this tendency. This may be partly because Slovenia has a higher level of GDP per capita than other New Member States in the sample[21] and at the same time the internet penetration in Slovenia is among the highest in the New Member States[22]. As pointed out by EC DG Enterprise and Industry (2009) country specific travel habits and traditions may also be important in explaining cross country differences in travel patterns.

Figure 6: Incidence of use of dynamic packages in the population within the last 2 years



Note: EU-17 is calculated as a weighted average of the 17 country estimates. Population sizes are used as weights. The figure for EU-27 is extrapolated using the methodology described in Annex 9. The level of accuracy for these calculations is as provided in Table 3.

Source: London Economics based on survey data from Ipsos MORI and data on average household sizes from Eurostat, Central Statistics Office Ireland and Statistiska Centralbyrån.

[21] Eurostat data from 2008. GDP per capita: Slovenia (€18,200), Poland (€9,500), Hungary (€10,500), Czech Republic (€14,200) and Bulgaria (€4,500).

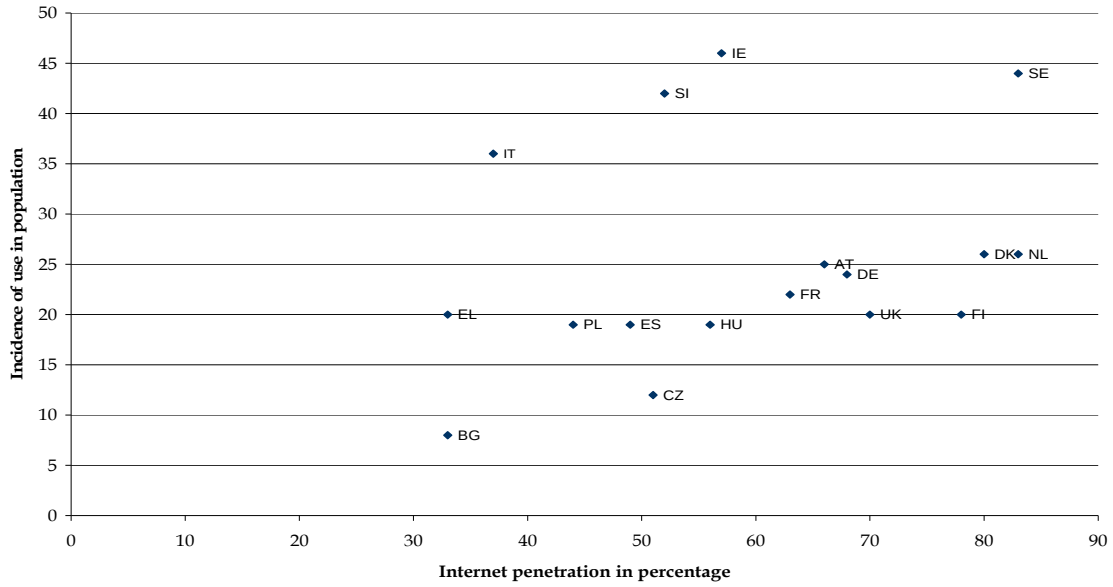
[22] Eurostat data from 2008. Internet penetration: Slovenia (52%), Poland (44%), Hungary (56%), Czech Republic (51%), Bulgaria (33%).

5.1.4 Correlation with internet usage and future prospects

An analysis of the correlation between the incidence of use and internet penetration, shows that there does seem to be a positive correlation between the two variables (Figure 7). However, particularly, Italy, Slovenia and Ireland seem to be outliers.

The positive correlation suggest that as internet usage increases even further in the coming years, a further increase in the use of dynamic packages should also be expected. However, it must be emphasized that there are also other factors than internet penetration which are important in determining the use of dynamic packaging. Intuitively, other factors such as concern over the security of online transactions or the availability of alternative means for booking dynamic packages may affect the relationship as well. This is illustrated in Figure 7 by the fact that all points in the scatter plot are not on a straight line. In other words there is cross country variation which cannot be explained by the level of internet penetration. Furthermore, a cross country regression analysis (see Annex A9.3) analysing the effect of GDP per capita, internet penetration and regional dummies (Eastern Europe, Mediterranean, Scandinavian) on the use of dynamic packages, shows that GDP per capita is the most important determinant of the incidence of use.

Figure 7: Scatter plot of internet penetration and incidence of use in the population



Note: Internet penetration is measures as the percentage of people who use the internet at least once per week, on average.

Source: London Economics based on survey data from Ipsos MORI and internet penetration from Eurostat.

5.2 Dynamic package characteristics

In this section, we describe the characteristics of dynamic packages. This includes reasons for purchasing dynamic packages; purchasing methods, and components included.

5.2.1 Reason for purchase of dynamic package

The survey asked respondents what had led them to purchase a dynamic package rather than a traditional package. The reasons provided were not mutually exclusive meaning that consumers could choose more than one of the reasons provided. The two most frequently stated reasons were greater flexibility and lower price compared to traditional packages (Figure 8). Each of these responses was provided by at least 50% of the people who use dynamic packages.

The two remaining reasons provided (higher quality choices; no traditional package was available) are also stated quite frequently. For EU-17, 35% of respondents say that this type of package provided higher quality choices and 25% that no traditional package was available.

Ten percent of all respondents said that they had purchased a dynamic package for another reason than those provided in the question. An analysis of the replies is provided in Table 20 in Annex 7 suggests that most of the respondents who answered 'other' did not know why a dynamic package had been purchased. This could for instance be when someone else made the actual purchase or if they could not remember the reason.

In nearly as many cases the respondents actually state some variation of the reasons provided in the question. For instance, some respondents say that they chose the dynamic package because the dates were suitable. In this case it would seem appropriate to conclude that the dynamic package was in fact chosen because it provided flexibility with respect to the dates. An inspection of the responses suggests that there is no reason to expect that the relative importance of the reasons would change if we were to re-categorise these open-ended answers into the categories provided in the questions.

Further, it seems that part of the reason why respondents like the flexibility of dynamic packages and the possibility of tailoring the holiday is that some people like the process of combining the different elements of the package.

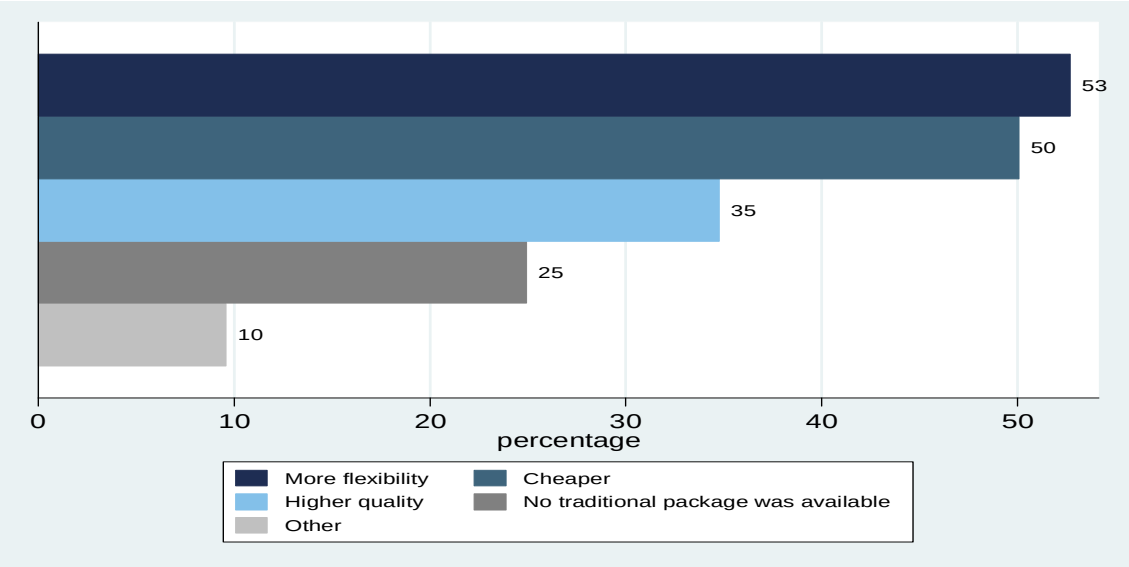
The most important reason to purchase dynamic packages which was not included in the question is that respondents find it easier to book a dynamic package than a traditional package. This may sound counterintuitive at first since a dynamic package needs to be assembled first whereas a traditional package is put together by the organiser. However, the open-ended responses to the question suggest that many of the people who choose dynamic packages do so because they know exactly what they want. For instance, some want to go to a particular destination, others want to

have particular types of excursions included, and yet others want to travel on specific dates. Since the consumers want the holiday to be tailored to them it may be easier for them to buy a dynamic package than to find a traditional package which includes all the elements that the consumer would like.

It should also be noted that some of the respondents who answer 'other' say that they bought a dynamic package and not a traditional because of friends' recommendation or because this was the way they usually purchased their holidays.

Finally, it is interesting that a few respondents bought the dynamic package thinking that it was a traditional package and that some other respondents say that they bought a dynamic package and not a traditional package because they thought it would be safer. This could indicate that consumers are confused about their rights and the protection offered by different types of packages. Alternatively, it may be that the respondents have misunderstood the question and compared dynamic packages to the alternative travel arrangements which might be relevant to them an in some cases this might be independent travel arrangements and not traditional packages.

Figure 8: Reasons for purchasing dynamic packages - weighted average for EU-17



Note: This is based on Question 5 of the questionnaire. The total numbers of responses was 7,991. Observations are weighted such that they represent the age and gender structure of the population in each country. This implies that EU-17 is a weighted average using population size as weights.
Source: London Economics based on data from Ipsos MORI.

5.2.2 Purchasing method

The complexity of the number and types of dynamic packages offered to consumers is best understood when we analyse the purchasing process. There are several ways in which dynamic packages are offered to consumers. For instance a dynamic package could be purchased using only websites, only a high street travel agent or using both a high street travel agent and websites. Consumers could also receive one or several billings for the package. A package purchased at a high street travel agent from whom only one billing is received is very similar to a traditional package. On the contrary, a dynamic package might more appropriately be considered a set of independent travel arrangements for the same trip if it is purchased using several linked websites and the cost is split into several bills.

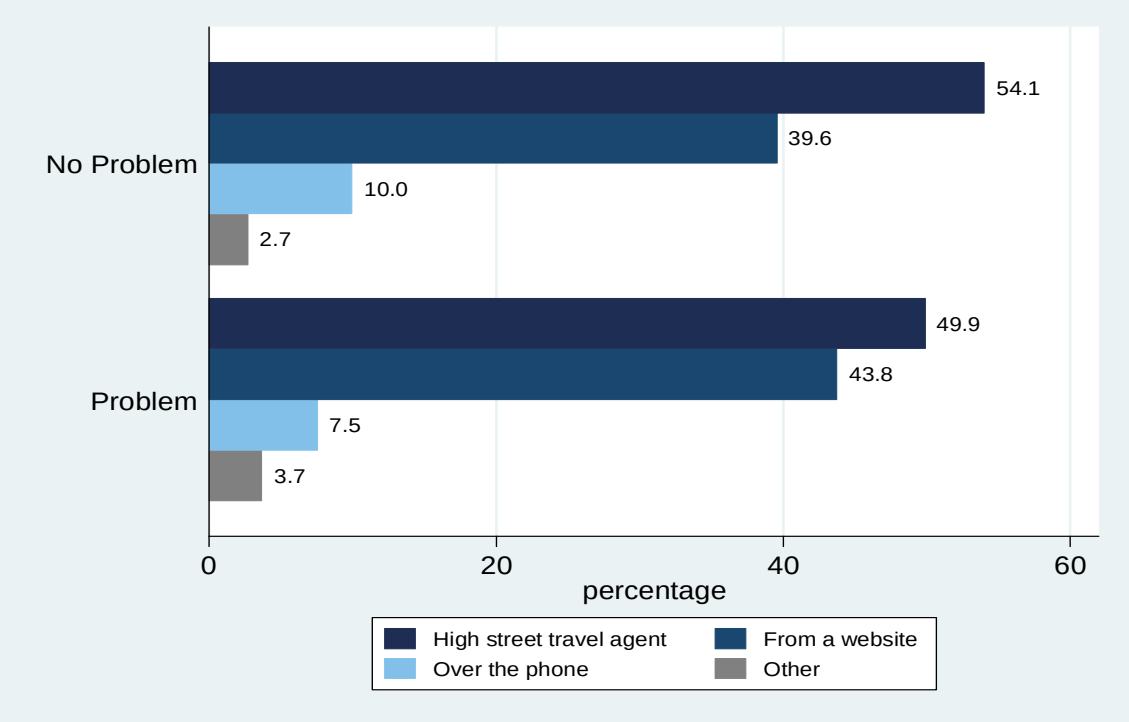
Sales channel

Dynamic packages can be purchased either through the websites, over the phone, at high street travel agents or using a combination of these methods.

An estimated 54% and 50% of non-problematic and problematic packages, respectively, were purchased from high street travel agents in EU-17 (Figure 9). In comparison 40% of non-problematic and 44% of problematic packages were purchased from websites, making this the second most popular method of purchase for dynamic packages in the 17 countries considered. Only 10% of non-problematic and 8% of problematic packages was purchased over the phone.

Overall there is a tendency that website purchases are overrepresented among the problematic packages. This suggests that problems are more likely to arise if the package was purchased using the internet. On the contrary, packages purchased using over the phone or from a high street travel agent are underrepresented among the packages which cause problems.

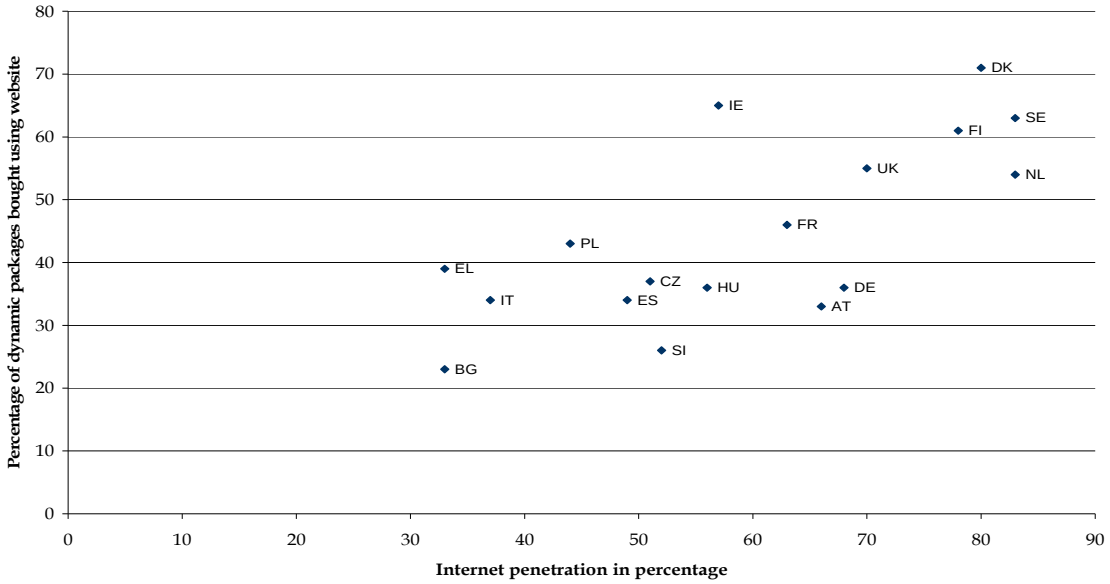
Figure 9: Sales channel for problematic and non problematic cases – weighted average for EU-17



Note: This is based on Question 11 of the questionnaire. The number of respondents with problems was 586 and the number of respondents without problems was 7,405. Question was referred to the most significant occasion on which he/she had experienced a problem. Observations are weighted such that they represent the age and gender structure of the population in each country. As a result the figures for EU-17 are effectively a weighted average of the country averages with population size used as weights.
Source: London Economics based on data from Ipsos MORI.

There is a clear correlation between the percentage of dynamic packages which are purchased using websites and internet penetration at the country level (Figure 10). Therefore, not surprisingly, internet penetration is an important determinant of website use in relation to purchasing dynamic packages. However, there is also significant cross-country variation in the use of websites to purchase dynamic packages which cannot be explained by internet penetration. It may be that factors such as trust, habit and the perception of consumer protection are also important when people decide whether to use the internet to purchase dynamic packages.

Figure 10: Cross-country scatter plot of internet penetration and percentage of dynamic packages bought using websites



Note: The percentage of dynamic packages bought using websites is calculates based on responses to Question 11 of the questionnaire. **Table 11** gives the total number of respondents for each country. Question was referred to most recent occasion using a dynamic package unless respondents had experienced a problem in which case the respondent was asked to refer to the most significant occasion on which he/she had experienced a problem. Observations are weighted such that they represent the age and gender structure of the population in each country. As a result the figures for EU-17 are effectively a weighted average of the country averages with population size used as weights.
Source: London Economics based on data from Ipsos MORI and Eurostat data on the percentage of the population who use the internet at least 1 time every week on average.

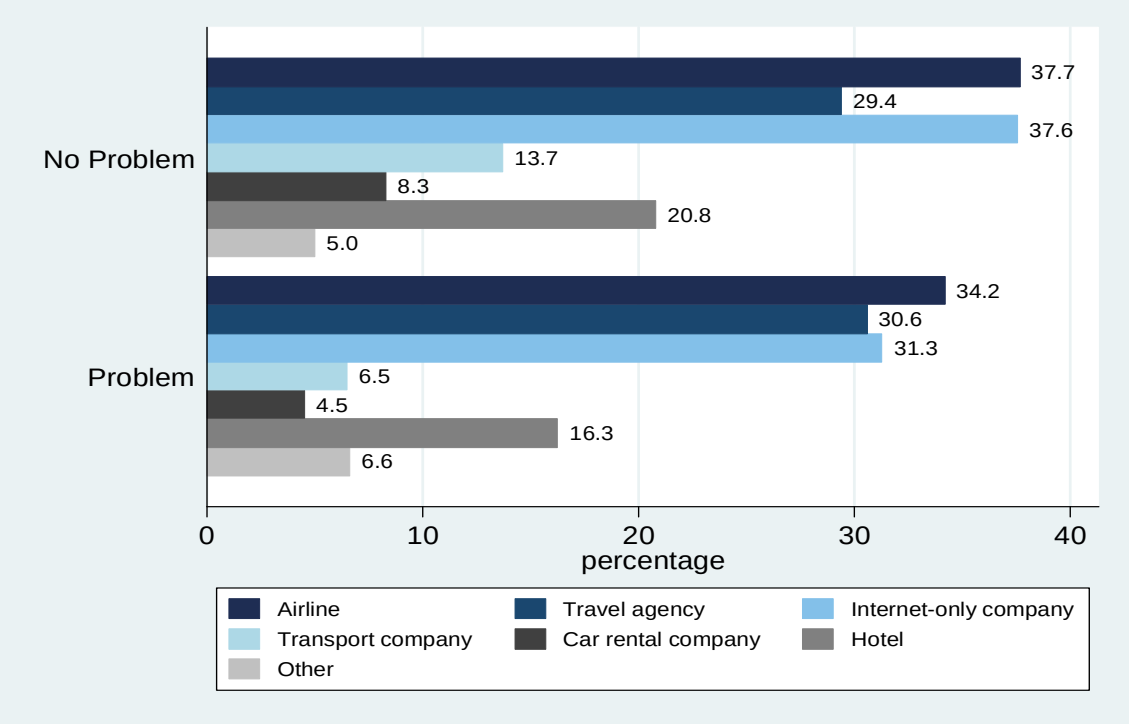
Websites used

Respondents who had used websites to purchase the package were asked which type of websites they had used.

Airline websites were most frequently used to purchase the dynamic package when websites were used. In particular, in 37.7% of the non-problematic cases and 34.2% of the problematic cases an airline website had been used. The second most commonly used type of website was websites of internet-only companies such as lastminute.com. Such websites were used in 37.6% of the non-problematic and 31.3% of the problematic cases. Travel agency websites were used in 29.4% of the cases for non-problematic cases and 30.6% of the cases for problematic cases. Notice that only travel agent websites were used more frequently for problematic cases than for non-problematic cases. This seems to suggest that dynamic packages purchased from websites of travel agents were more likely to be problematic than dynamic packages purchased from other websites. Further, there seems to be a tendency that non-

problematic packages were purchased using more different types of websites than problematic packages.

Figure 11: Websites used to purchase the package – weighted average for EU-17 (only applicable if the internet had been used to purchase the package)



Note: This is based on Question 12 of the questionnaire. This question was asked only to respondents who had used the internet to purchase the package. The number of respondents with problems was 241 and the number of respondents without problems was 1,192. Question was referred to most recent occasion using a dynamic package unless respondents had experienced a problem in which case the respondent was asked to refer to the most significant occasion on which he/she had experienced a problem. Observations are weighted such that they represent the age and gender structure of the population in each country. As a result the figures for EU-17 are effectively a weighted average of the country averages with population size used as weights.
Source: London Economics based on data from Ipsos MORI.

Presentation of components on websites

Another aspect of purchases from websites is the presentation of the different components to the customer. In particular, are all components presented on the same website; is the customer redirected to other websites; and does the customer purchase all components at the same time.

Most frequently (48% of non-problematic cases) all components of the package had been presented to the respondent on only one website (Figure 12). In comparison, for 26% of purchases of non-problematic packages the customer was redirected and in

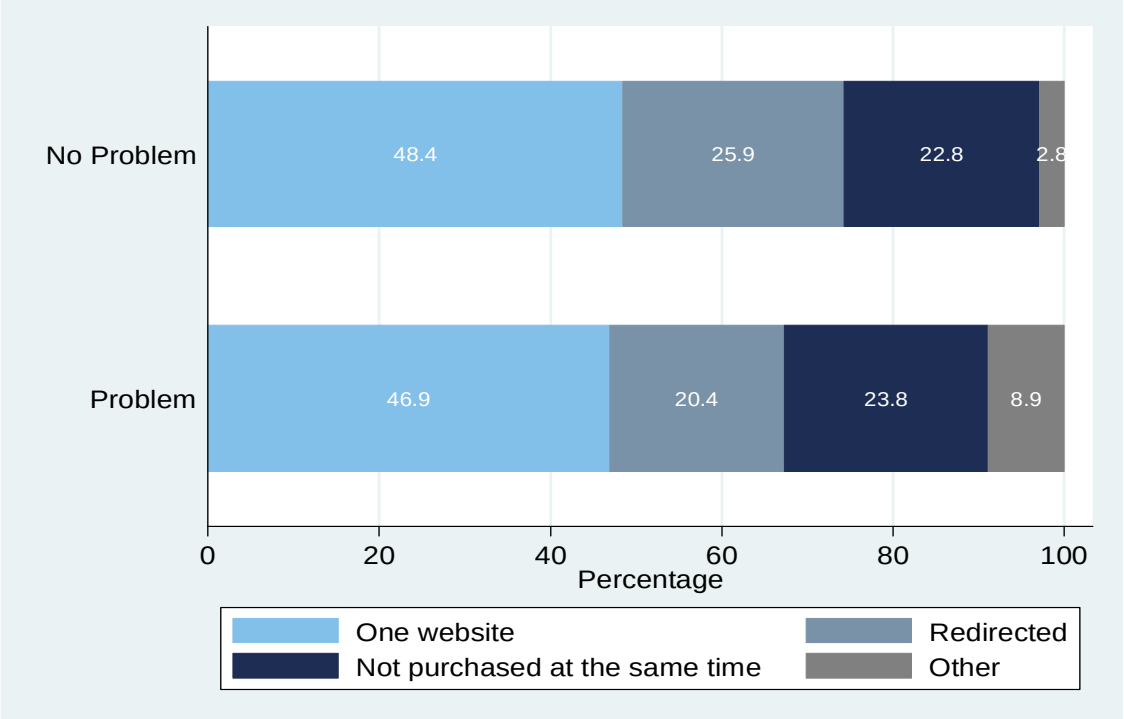
23% of the cases the customer had not purchased all components of the package at the same time.

It is clear that a slightly smaller share of respondents who had experienced problems (47%) than of respondents with no problems (48%) had purchased all elements of the package using on one homepage (Figure 12).

On the contrary, there is a slight overrepresentation of packages where all elements were not purchased at the same time among the problematic packages. In particular, all components of the package were not purchased at the same time for 23% of the non-problematic packages and 24% of the problematic packages.

These are only slight differences. The main difference in the responses for problematic and non-problematic cases is that more respondents were redirected in the non-problematic cases and fewer replied 'other'. We note that respondents who stated 'other' typically could not remember or did not know because another member of the party had made the actual booking.

Figure 12: Presentation of different elements of the package for EU-17 (only applicable if the internet had been used to purchase the package)



Note: This is based on Question 14 of the questionnaire. This question was asked only to respondents who had used the internet to purchase the package. The number of respondents with a problem was 241 and the number of respondents without a problem was 1192. Question was referred to most recent occasion using a dynamic package unless respondents had experienced a problem in which case the respondent was asked to refer to the most recent occasion on which he/she had experienced a problem. Observations are weighted such that they represent the age

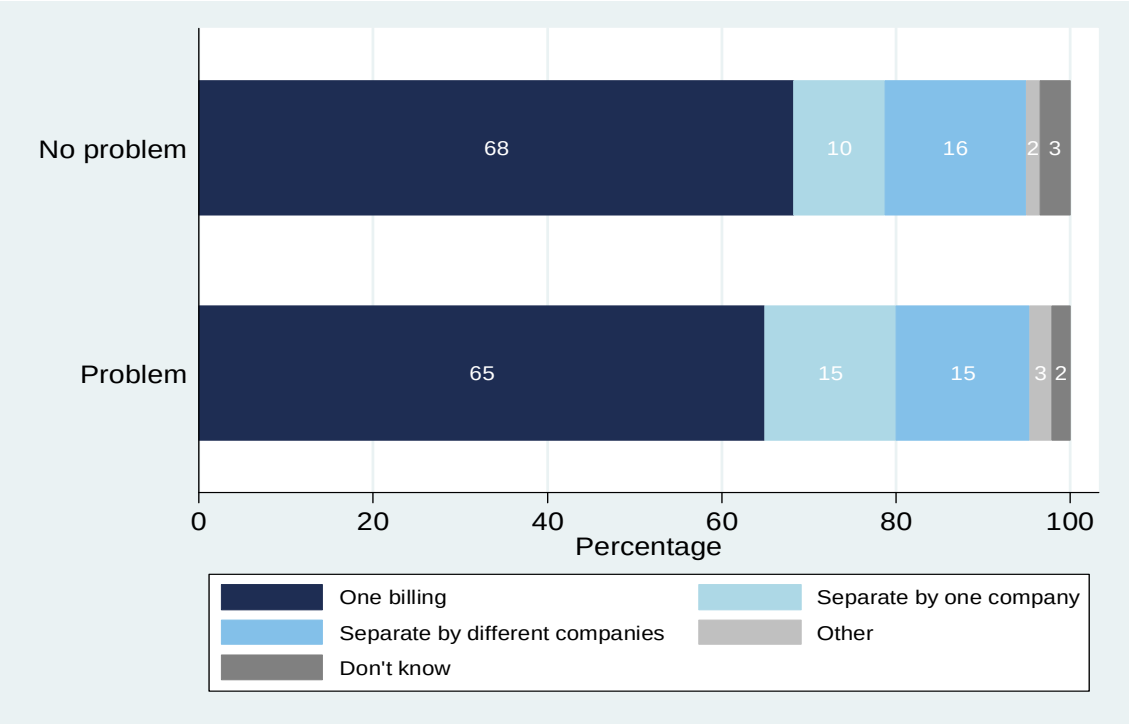
and gender structure of the population in each country. As a result the figures for EU-17 are effectively a weighted average of the country averages with population size used as weights.
Source: London Economics based on data from Ipsos MORI.

Method of billing

Sixty eight percent of customers with non-problematic packages and 65% of customers with problematic packages in EU-17 received only one billing (Figure 13). Far less had received separate billings for different components of the trip. For instance, only 10% of consumers with non-problematic packages and 15% of customers with problematic packages had received separate billings from the same company and 15-16% had received separate billings by different companies.

We notice that customers who had received separate billings seem to be slightly overrepresented among those who experienced problems.

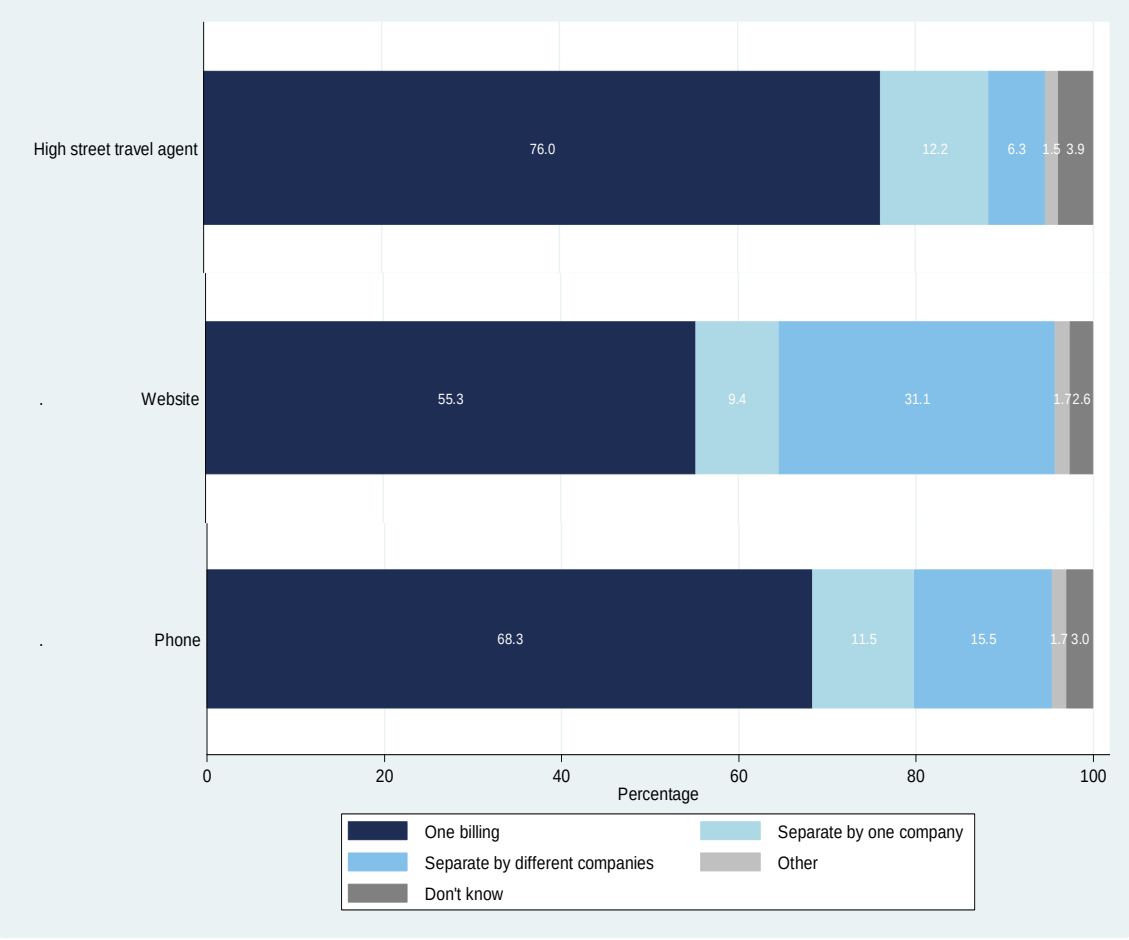
Figure 13: Billing for the package for EU-17



Note: This is based on Question 15 of the questionnaire. The number of respondents with and without problems was 586 and 7405, respectively. Question was referred to most recent occasion using a dynamic package unless respondents had experienced a problem in which case the respondent was asked to refer to the most significant occasion on which he/she had experienced a problem. Observations are weighted such that they represent the age and gender structure of the population in each country. As a result the figures for EU-17 are effectively a weighted average of the country averages with population size used as weights.
Source: London Economics based on data from Ipsos MORI.

Consumers who purchased their package from a high street travel agent received only one billing in 76% of the cases compared to 68% and 55% for phone purchases and website purchases, respectively. Consequently, more billings were typically received if websites were used to make the purchase then if the purchase was made using the phone or from high street travel agents (Figure 14).

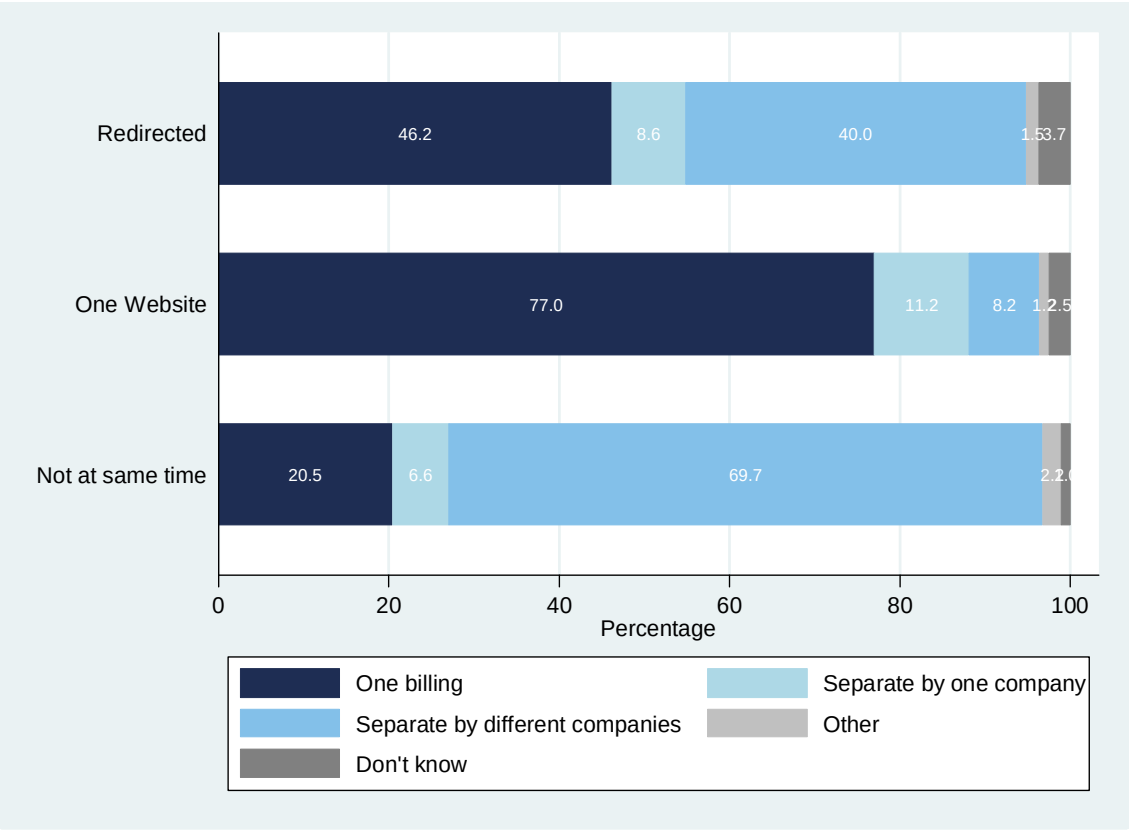
Figure 14: Billing for the package by sales channel for EU-17



Note: This is based on Question 15 and question 11 of the questionnaire. The number of respondents was 7,991. Question was referred to most recent occasion using a dynamic package unless respondents had experienced a problem in which case the respondent was asked to refer to the most significant occasion on which he/she had experienced a problem. Observations are weighted such that they represent the age and gender structure of the population in each country. As a result the figures for EU-17 are effectively a weighted average of the country averages with population size used as weights.
Source: London Economics based on data from Ipsos MORI.

Survey results also suggest that if packages are purchased using the internet, 77% customers receive only one billing if all components of the package are purchased from the same website. In comparison, only 46% receive just one billing if they are redirected between websites and as little as 21% of customers who do not purchase all components of the package at the same time receives only one billing (Figure 15). This implies that the less complex the presentation of the components was the more likely it seems to be that only one billing is received.

Figure 15: Billing for the package by method of presentation for EU-17 (only applicable if the internet was used to purchase the package)

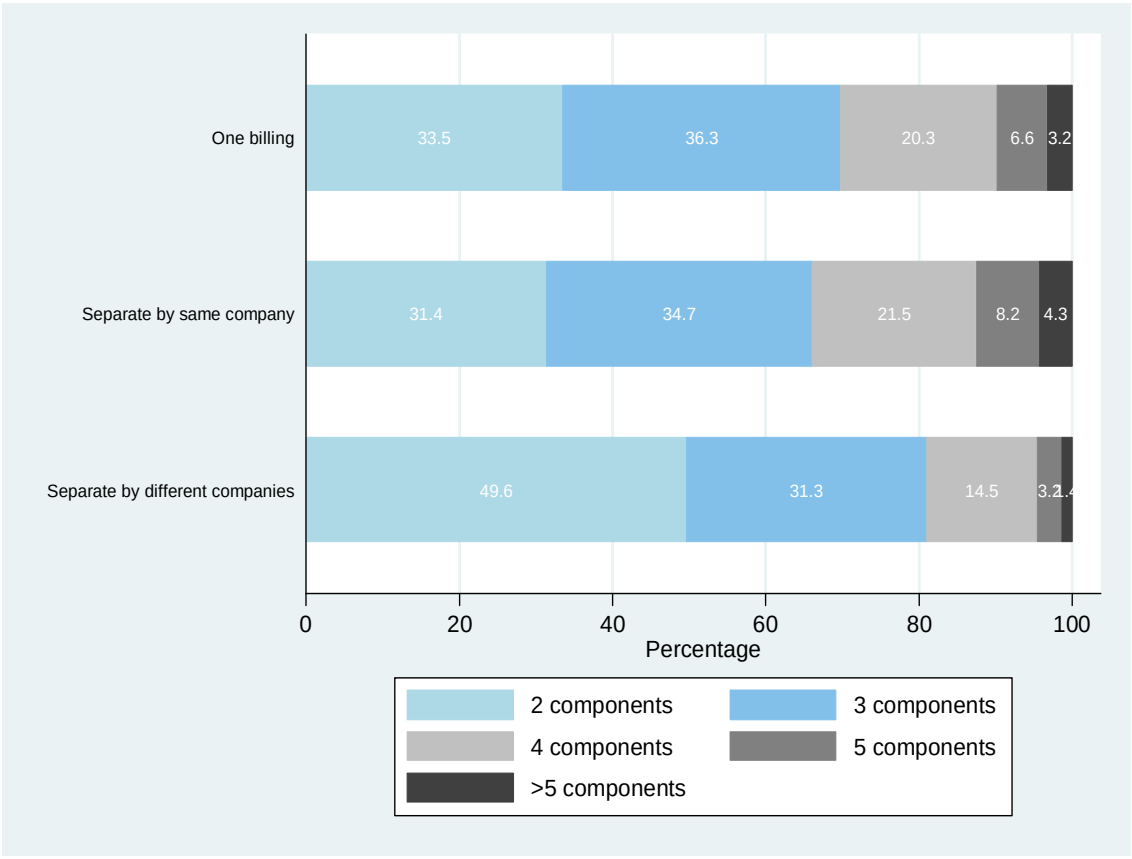


Note: This is based on Question 15 and question 14 of the questionnaire. The question was only asked to respondents who had used the internet to purchase the package. The number of respondents was 3603. Question was referred to most recent occasion using a dynamic package unless respondents had experienced a problem in which case the respondent was asked to refer to the most significant occasion on which he/she had experienced a problem. Observations are weighted such that they represent the age and gender structure of the population in each country. As a result the figures for EU-17 are effectively a weighted average of the country averages with population size used as weights.
Source: London Economics based on data from Ipsos MORI.

It turns out that there is no clear link between the number of different elements included in the package and the billing method (Figure 16). However, it seems

relatively many of the respondents who received several billings from different companies had purchased only a few components (50% had purchased 2 components and 31% had purchased 3 components). It might be more appropriate to characterise what they purchased as independent travel arrangements but nevertheless the consumers are under the perception that it is a dynamic package that they have purchased. It should also be noted that a larger share (34%) of those who receive separate billings by one company purchase more than 3 components than is the case for those who receive only one billing (30%). This finding is quite intuitive and an explanation might be that consumers who have purchased a package return at a later point in time to purchase additional components or simply that sellers issue more billings if many components are purchased.

Figure 16: Number of components in package by method of billing for EU-17

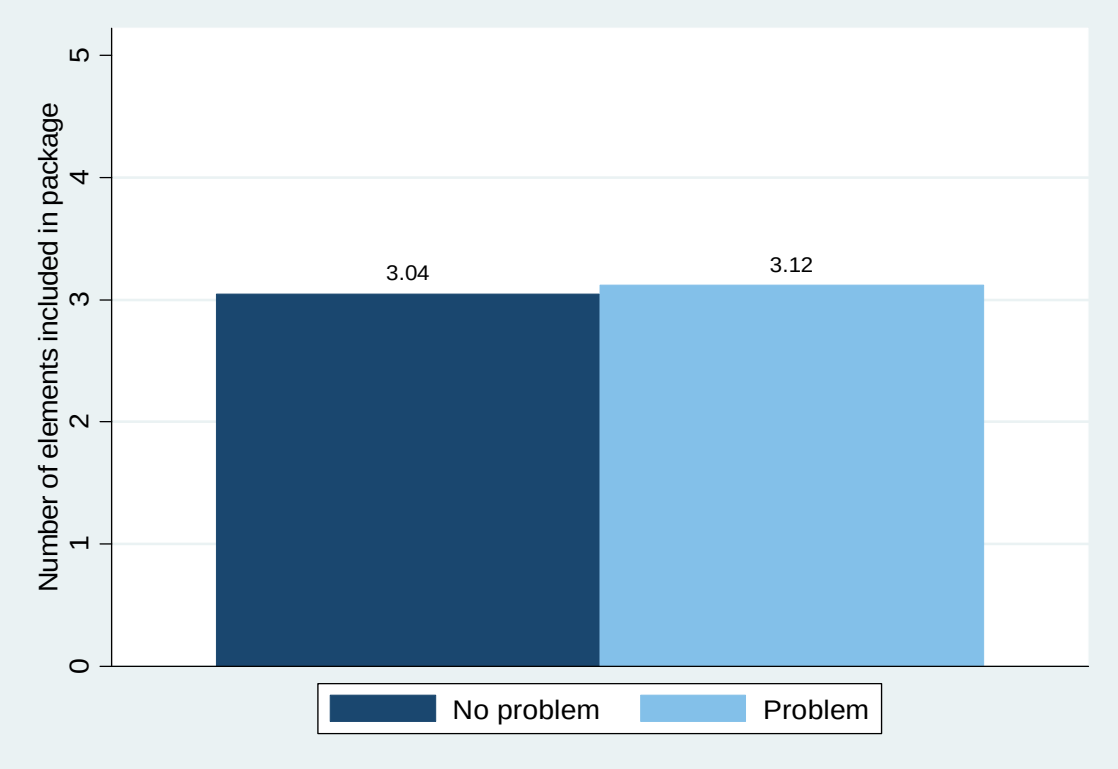


Note: This is based on Question 15 and question 13 of the questionnaire. **Table 11** gives the total number of respondents for each country. Question was referred to most recent occasion using a dynamic package unless respondents had experienced a problem in which case the respondent was asked to refer to the most significant occasion on which he/she had experienced a problem. Observations are weighted such that they represent the age and gender structure of the population in each country. As a result the figures for EU-17 are effectively a weighted average of the country averages with population size used as weights.
Source: London Economics based on data from Ipsos MORI.

5.2.3 Components included

An indicator of the complexity of models purchased is the number of different components included in the package. On average we estimate that problematic packages in EU-17 include slightly more components (on average 3.12 components) than non-problematic packages (on average 3.04 components) (Figure 17). That is there is a slight tendency that packages affected by problems are more complex than packages not affected by problems. This might be explained by the fact that when more components are included in the package there are more things which could potentially go wrong.

Figure 17: Number of different components included in the packages with and without a problem



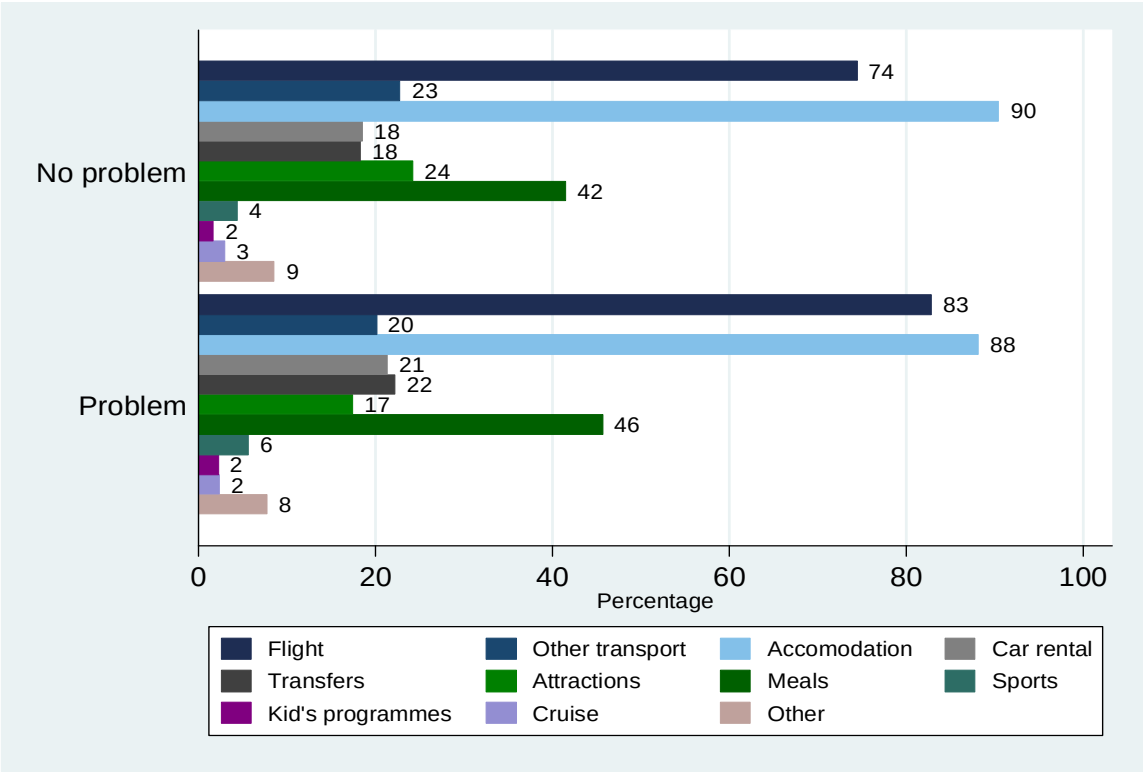
Note: This is based on Question 13 of the questionnaire. The number of respondents with problems is 586 and the number of respondents without problems is 7,405. Question was referred to most recent occasion using a dynamic package unless respondents had experienced a problem in which case the respondent was asked to refer to the most significant occasion on which he/she had experienced a problem.. Observations are weighted such that they represent the age and gender structure of the population in each country. As a result the figures for EU-17 are effectively a weighted average of the country averages with population size used as weights.
Source: London Economics based on data from Ipsos MORI.

The majority of packages contained accommodation and/or flights (Figure 18). Accommodation was the most typical component and it was in included in 90% of non-problematic packages and 88% of non-problematic packages.

A comparison of problematic and non-problematic packages suggests that the contents of problematic packages in many respects are similar to non-problematic packages. However, there does seem to be a tendency that problematic packages more frequently contained flights (83% compared to 74% for all packages). This could indicate that packages with flights result in more problems than other packages.

Meals were included in 42% of the non-problematic packages; attractions in 24%; and other transport in 23% of the packages. All other components were included in less than 20% of the packages. Meals, sports, car rental and transfers are also slightly overrepresented in problematic packages. No other component seems to be overrepresented in problematic packages.

Figure 18: Components included in the package – weighted average for EU-17



Note: This is based on Question 13 of the questionnaire. The number of respondents with problems is 586 and the number of respondents without problems is 7,405. Question was referred to most recent occasion using a dynamic package unless respondents had experienced a problem in which case the respondent was asked to refer to the most significant occasion on which he/she had experienced a problem. The components are not mutually exclusive. Observations are weighted such that they represent the age and gender structure of the population in each country.

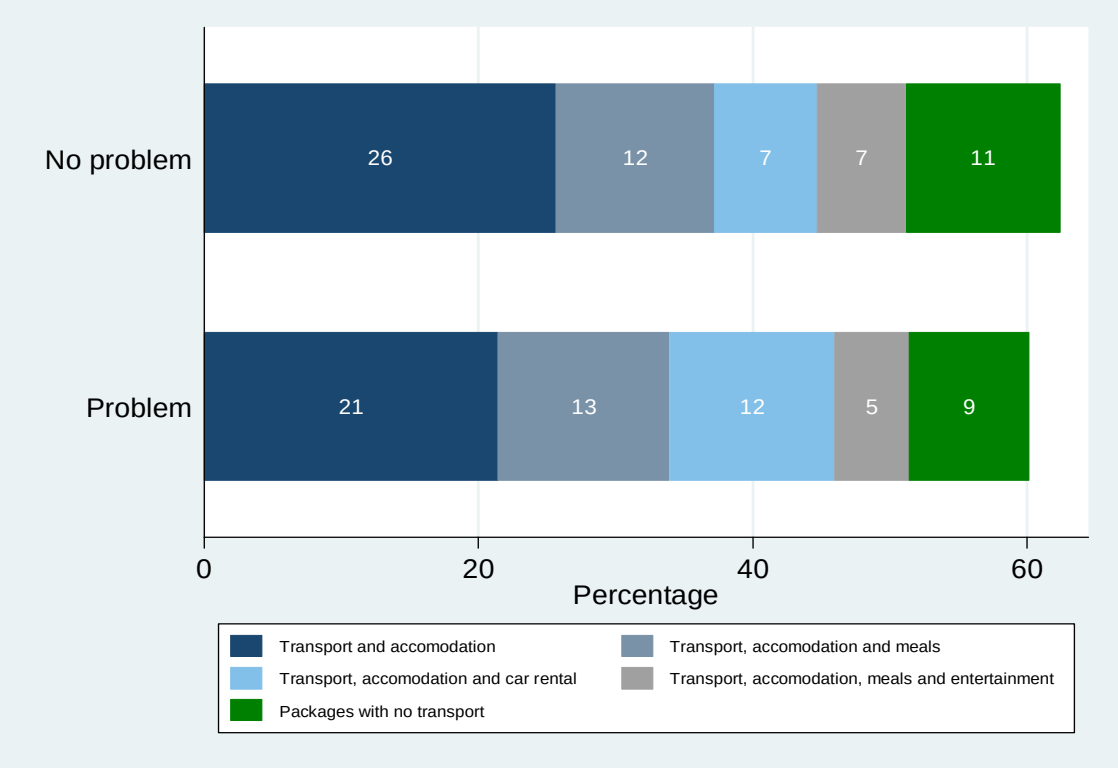
As a result the figures for EU-17 are effectively a weighted average of the country averages with population size used as weights.
Source: London Economics based on data from Ipsos MORI.

In some countries, particularly the Czech Republic, a large share of respondents (30%) said that the package included other components than those suggested in the question. However, in most cases when the answer 'other' was stated, the response specified merely provided more details than the closed-answer options and could have been coded in one or more of the categories provided in the question. For instance, many of the Finnish respondents specified that their package had included breakfast. Such a response could have been coded as meals. In other cases respondents specify the type of excursion included, for example, safari or city tour. Although there are examples of such responses for all of the categories provided in the question, there seems to be relatively many related to "attractions, shows, excursions" and to "Meals or meals and drinks". In the case of the Czech Republic most of the 'other' responses could have been re-categorised as "attractions, shows, excursions".

The most important component which was not included in the question but which was part of relatively many packages was travel insurance (see Table 22).

Figure 18 suggests that most packages purchased include flights (74%) and accommodation (90%). Figure 19 shows the most prevalent combination of components in packages. Twenty-six percent of the non problematic packages and 21% of the problematic packages included only accommodation and transportation. Hence packages with only transport and accommodation seem to be slightly underrepresented among the problematic packages. On the other hand' packages with transport, accommodation and car rental are overrepresented among packages which cause problem.

Figure 19: Most prevalent types of packages purchased



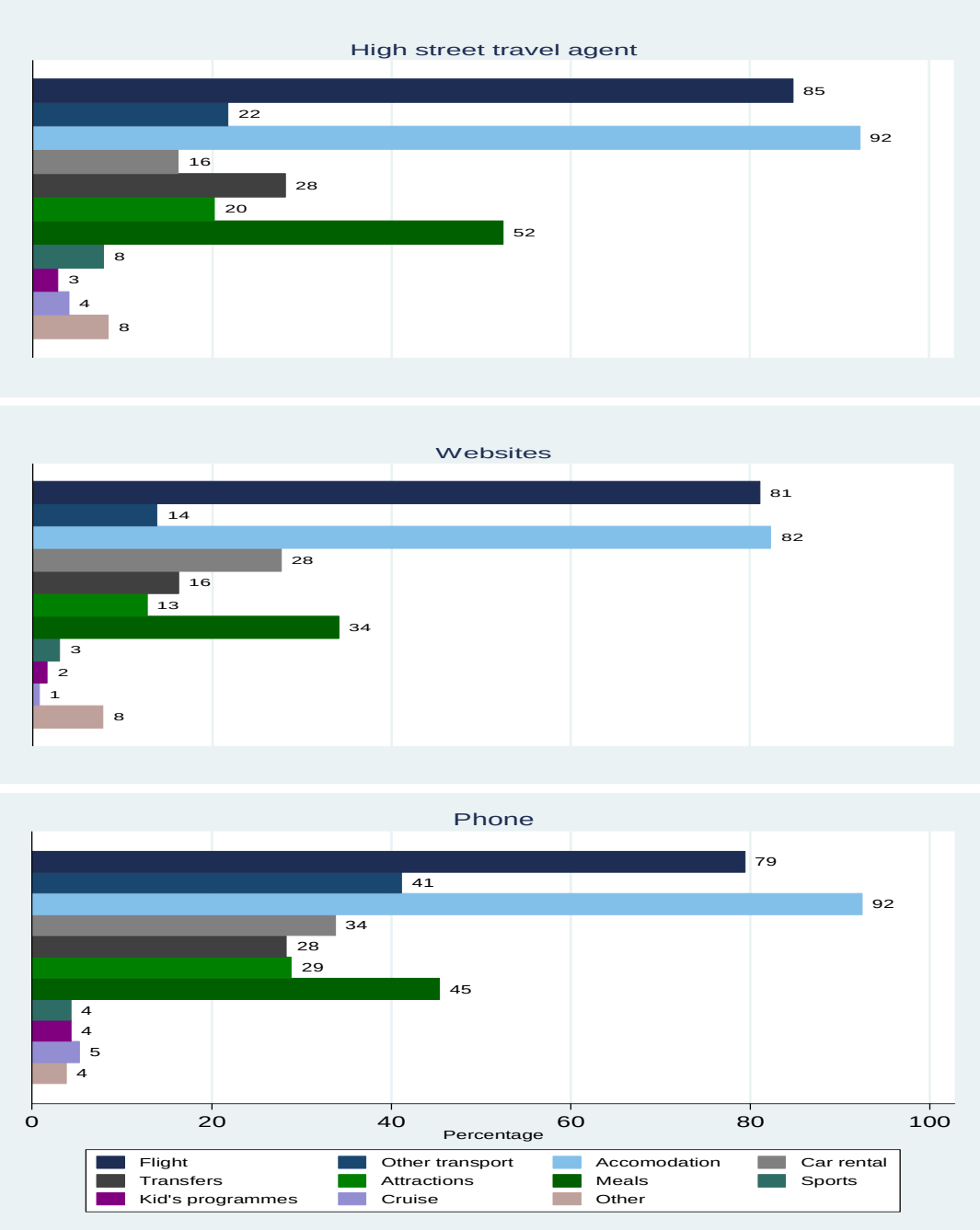
Note: This is based on Question 13 of the questionnaire. The number of respondents with problems is 586 and the number of respondents without problems is 7,405. Question was referred to most recent occasion using a dynamic package unless respondents had experienced a problem in which case the respondent was asked to refer to the most significant occasion on which he/she had experienced a problem. The elements are not mutually exclusive. The packages included in the figure are the most prevalent types in the total sample. Observations are weighted such that they represent the age and gender structure of the population in each country. As a result the figures for EU-17 are effectively a weighted average of the country averages with population size used as weights.
Source: London Economics based on data from Ipsos MORI.

The types and contents of the packages sold at high street travel agents, websites and over the phone may differ. Problematic packages purchased from websites and from high street travel agents are similar in terms of the types of components included in the packages (Figure 20). However, it seems that problematic packages bought from high street travel agents more frequently include all of the types of components analysed except for car rental. This seems to suggest that packages brought from websites include fewer components than packages bought from high street travel agents. This conclusion also broadly holds if we compare packages bought from websites with packages bought over the phone. Consequently, packages bought from websites seem to be less complex than packages bought through other sales channels.

Packages bought over the phone, nevertheless, less frequently include flights than packages bought from high street travel agents or websites. Packages bought over the phone more frequently include all other types of components than packages bought

via websites. In addition, packages bought over the phone more frequently than packages bought at high street travel agents include all types of components except for flights, meals and sports. Therefore, packages bought over the phone seem relatively complex compared to packages bought through other sales channels.

Figure 20: Components included in packages which caused problems by sales channel



Note: This is based on Question 13 of the questionnaire and responses from people who had a problem. The number of respondents with problems is 311. Question was referred to the most significant occasion on which he/she had experienced a problem. The elements are not mutually exclusive. Observations are weighted such that they represent the age and gender structure of the population in each country. As a result the figures for EU-17 are effectively a weighted average of the country averages with population size used as weights.
Source: London Economics based on data from Ipsos MORI.

5.3 Problems suffered and consequences

Some of the respondents had experienced problems with dynamic packages. In this section we describe survey responses related to the type and consequences of these problems. This is structured under the following headings:

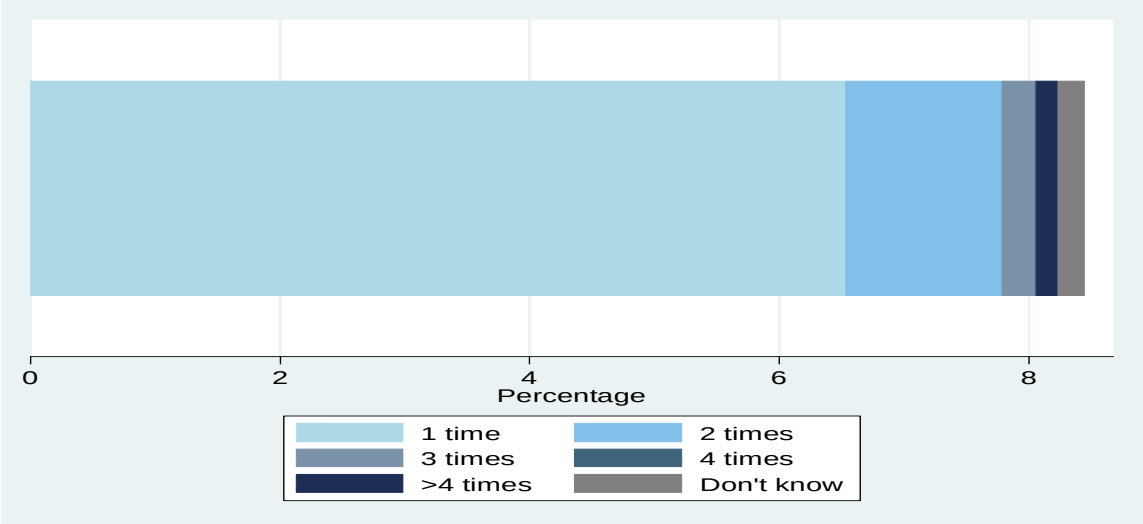
- Incidence of problems;
- Types of problems;
- Cost of problems;
- Time spent solving the problem;
- Emotional effects; and
- Compensation.

5.3.1 Incidence of problems

As a first step in understanding the experiences with dynamic packages we consider the incidence of problems in the sample and among the population.

Most of the respondents in the survey had not personally experienced a problem with dynamic packages within the last 2 years and we estimate that 8.2% of the respondents had. Furthermore, the majority of those who had experienced problems had only experienced problems with dynamic packages one time within the last 2 years and only very few respondents had experienced problems more than 4 times (Figure 21). On average, those who had experienced a problem had experienced a problem 1.30 times within the last 2 years.

Figure 21: Incidence of problems with dynamic packages in the last 2 years by number of problems



Note: This is based on Question 6 of the questionnaire. The question was asked to all respondents. The number of respondents is given in **Table 11** for each of the countries in the sample. Observations are weighted such that they represent the age and gender structure of the population in each country. This implies that EU-17 is a weighted average using population size as weights.
Source: London Economics based on data from Ipsos MORI.

To get an estimate of the share of the population who had been affected by problems with dynamic packages in each of the sample countries we need to take into account that

- in some countries we find that more people travel together on packages which cause problems than on dynamic packages in general; and
- the incidence of purchase of dynamic packages varies by country and as a result so does the share of the population affected by problems.

The percentage of the population which has experienced problems with dynamic packages is calculated as the incidence of problems in the sample multiplied by the incidence of use of dynamic packages and a correction factor which takes into account that more people travel on problematic packages. For the details of the methodology and calculation we refer to annex **A5.2**.

We estimate that 2.0% of the population in EU-17 has experienced problems with dynamic packages and 1.9% of the population in EU-27. Across the sample countries this figure ranges from 0.6% in the Czech Republic to 3.8% in Slovenia (Figure 22). The variations are largely explained by differences in:

- the incidence of use; and

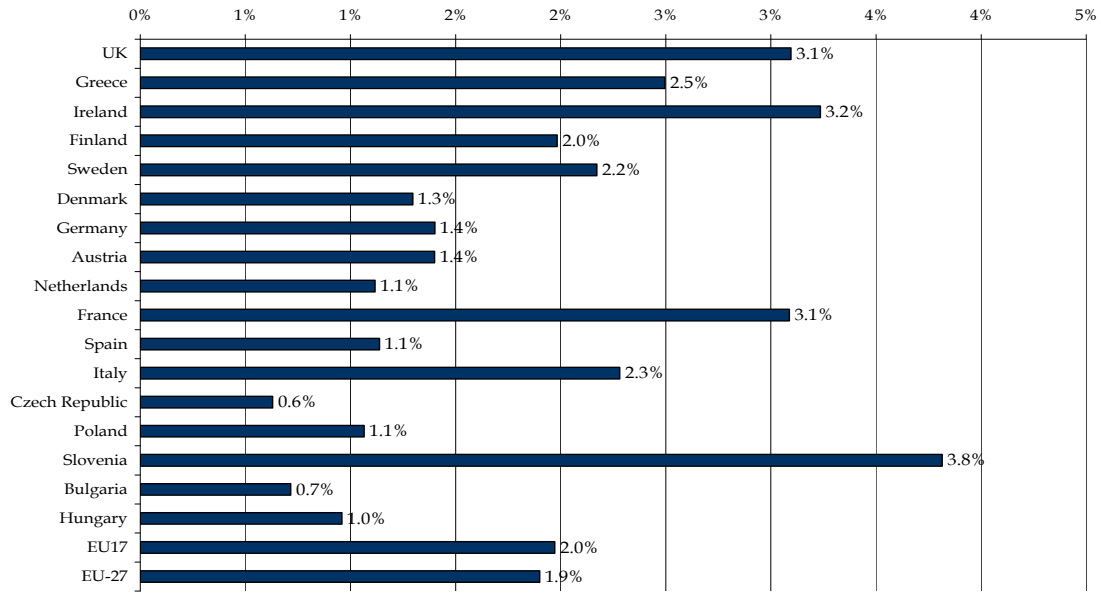
- the incidence of problems in the sample.

For instance, in Ireland, Italy and Slovenia a large share of the population is affected by problems because the use of dynamic packages is very widespread. At the same time, in Sweden the use of dynamic packages is quite widespread but there are relatively few problems with the packages and problems typically affect relatively few people.

On the other hand, in the UK, France and Greece a relatively high share of the population is affected by problems with dynamic packages but this is primarily because a large proportion of the packages cause problems.

A relatively small share of the population was affected by problems with dynamic packages in most of the New Member States (with the exception of Slovenia) because dynamic packages are less widespread.

Figure 22: Share of population affected by problems within the last 2 years



Note: EU-17 figure calculated as a weighted average of the country estimates. Population size is used as weights. The figure for EU-27 is extrapolated using the methodology described in Annex 9. The level of accuracy for these calculations is as provided in Table 3of Section 6

Source: London Economics based on population data from Eurostat and survey data for questions 6 and 9 of the questionnaire.

5.3.2 Types of problems

Respondents who had experienced problems with dynamic packages provided a brief description of the problem. In order to process the information we have grouped the responses and summarized the findings in Table 20 in Annex 7.

A number of conclusions emerge from the responses. Firstly the most prevalent types of problems stated are related to:

- provision of incorrect or incomplete information prior or during the holiday (22% of EU-17 problems);
- services provided were of a much lower standard than expected or services were not provided at all (17%); and
- flight or other transportation was delayed or included long waiting time (17%.

This is well in line with the findings of a 2006 study by Ipsos of consumer detriment in Victoria, Australia. It found that 48% of problems related to recreation and leisure including holiday travel could be categorised as delivery of defective or substandard goods and services. In addition, 9% of problems could be categorised as non-delivery of goods and services. The UK Office of Fair Trading (OFT) has reported similar findings.[23]

The provision of incorrect or incomplete information is often related to hotel facilities, location and standard but could also be related to what components of the holiday are included in the price of the package; last minute changes to travel itinerary and price; or identification requirements.

Incomplete information and incorrect information leads to disappointment with the services provided; and misunderstandings regarding the responsibilities of the service provider and the customer respectively. In many cases the consumer is dissatisfied with the information level but does not complain over the services provided. However, in many cases the provision of incorrect or incomplete information will be closely linked with the experience that services provided do not live up to expectations. This is particularly the case in relation to accommodation standards.

A large share of the people who complain that services were not provided or were of a much lower quality, experienced problems with the booking system either because

[23] OFT (2000). The 2000 study of consumer detriment finds that about 51% of problems were related to substandard services and about 7% of problems were related to non-delivery. Further a 1998 study of complaints to the UK Trading Standards Departments found that about 48% of complaints were related to substandard services and about 6% were related to non-delivery of services. It should be noted that these are general findings and not specifically related to the holiday industry.

of hotel or flight overbooking or because the booking was simply missing in the system. Such problems are typically related to accommodation or car rental.

Further, many of the services which were not provided were related to specific request made by the customer such as a room with a view or private transfer services.

Flight and other transport delays and long waiting times in relation to transportation are relatively common problems. Respondents complain that it is costly because connecting flights are missed; accommodation or car rental reservations are lost; and time which should have been spent on holiday or at work is wasted. Such waiting times and delays seem to cause a lot of frustration because consumers have no or only limited possibility to take action. On the other hand, when for instance accommodation is of a poor quality, respondents in some cases chose to find alternative accommodation.

Besides the problems mentioned above other common problems with the dynamic packages include:

- problems with cleanliness and health and safety;
- items which were not working;
- problems with luggage such as theft and luggage delays;
- poor quality of staff;
- cancellation of holiday by seller or bankruptcy of seller; and
- problems with payment for holiday (e.g. charged twice for the same package or component).

There are not clear cross-country differences in the types of problems encountered by respondents from the different countries.

Finally, the analysis of the responses suggests that some of the problems recorded are not directly related to the provisions of the Directive. In particular some respondents say they had problems with the booking process for instance because it was difficult to find the best price or because they were charged twice for the same service. This is not surprising when we compare to the results of Ipsos' consumer detriment study for Victoria, Australia. The study concludes that 14% of problems are related to selling techniques and another 11% to discrepancies between the initial and the final price. It should be noted that the study for Victoria includes flight-only travel where differences between the initial and the final price are known to occur relatively frequently.

Other problems recorded in this questionnaire seem to be even further away from the provisions of the Directive. For instance some state that the problems were not the fault of the seller or service provider rather it was the fault of the consumer.

5.3.3 Cost of problems

The survey asked respondents who had experienced a problem with their dynamic package to estimate the financial costs associated with the problem. In order to make it easier for respondents to estimate the costs, respondents were asked about their costs in the following categories:

1. Purchasing replacement or additional items and services
    - Travel on outward and inward journey
    - Transfer services
    - Travel for excursions and day trips which should have been included
    - Accommodation
    - Other components of an 'inclusive' package that should have been provided at no extra charge
    - Car rental
    - Other items or services
2. Illness or injury suffered
3. Following up or trying to resolve the problem
    - Communication costs
    - Travel/petrol/accommodation costs
    - Legal costs
    - Other expert advice costs
4. Other 'out of pocket' costs

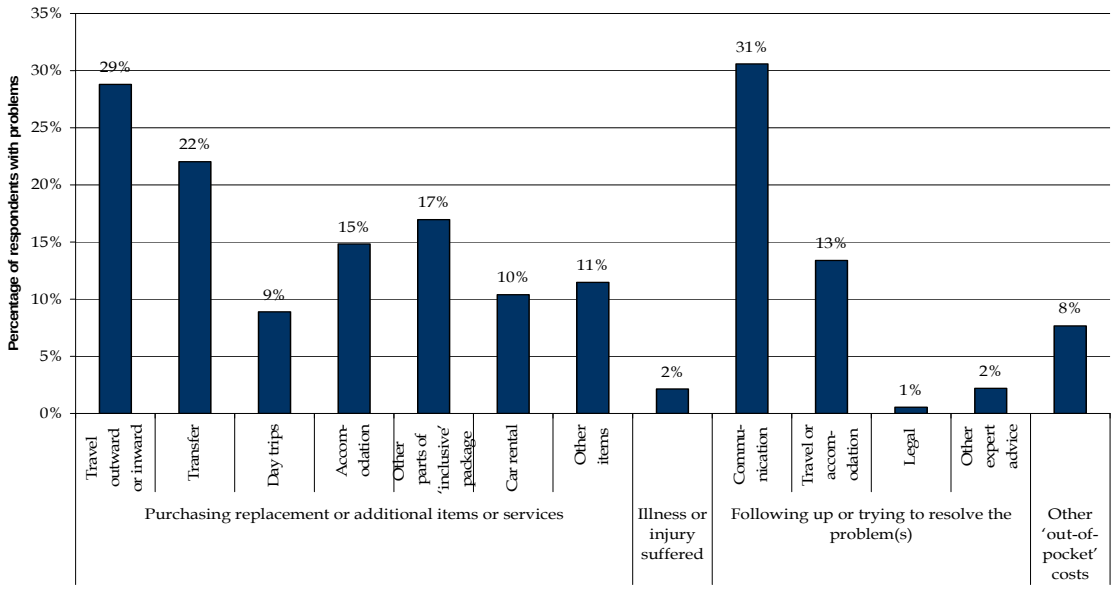
Naturally, the types of costs incurred depended on the type and severity of the problems and therefore in some cases level and structure of costs that respondents had incurred varied considerably.

Thirty-one percent of respondents who had experienced problems had incurred communication costs (Figure 23). This was the most common type of costs incurred. Probably because it is a costs incurred in relation to solving the problem and therefore it potentially applies to all types of problems which respondents may have occurred. A 2000 study of consumer detriment undertaken by the OFT suggested that 43% of respondents experienced communication costs and thus backs up our finding that communication costs is the most common type of cost. The OFT figure does not only relate to holiday travel and is based also a problems with other goods and services. This might explain why the figure is so much higher than what we find.

Other costs which more than 10% of respondents incurred include travel costs in relation to inward or outward journey; costs of transfer services; accommodation costs; and travel, petrol or accommodation costs in relation to solving the problem.

It is worth noting that only 1-2% incurred legal costs and other expert advice costs. This is in line with the 1.1% and 1.7%, respectively, estimated by the OFT in 2000.

Figure 23: Incidence of experiencing costs associated with the problem for EU17



Note: This is based on question 19. This applies to respondents with problems and the number of respondents is 586. See details in **Annex 6**. Observations are weighted such that they represent the age and gender structure of the population in each country. As a result the figures for EU-17 are effectively a weighted average of the country averages with population size used as weights.
Source: London Economics based on data from Ipsos MORI.

In order to get an idea about the relative size of the cost items we report the simple average of each cost item in Table 4 along with the minimum, the 10th percentile, the 90th percentile, and the maximum.

Replacement costs for travel on inward and outward journeys is on average the largest cost item (€134) followed by accommodation (€54). Generally average replacement costs represent larger costs than average follow-up costs, costs associated with illness or injury, and other 'out-of-pocket' costs.

Table 4 also reveals that in all cases the minimum cost reported is 0 and in fact so many respondents report 0 costs for each item that the 10th percentile is also 0 in all cases. This indicates that the distribution of costs for each cost item is heavily skewed to the left. However, some people also experience very large costs. For instance the maximum cost associated with illness and injury is €7,000 but the average is just €6 and the 90th percentile is €0. This illustrates that very few people experienced this cost but for those who did it was a significant cost.

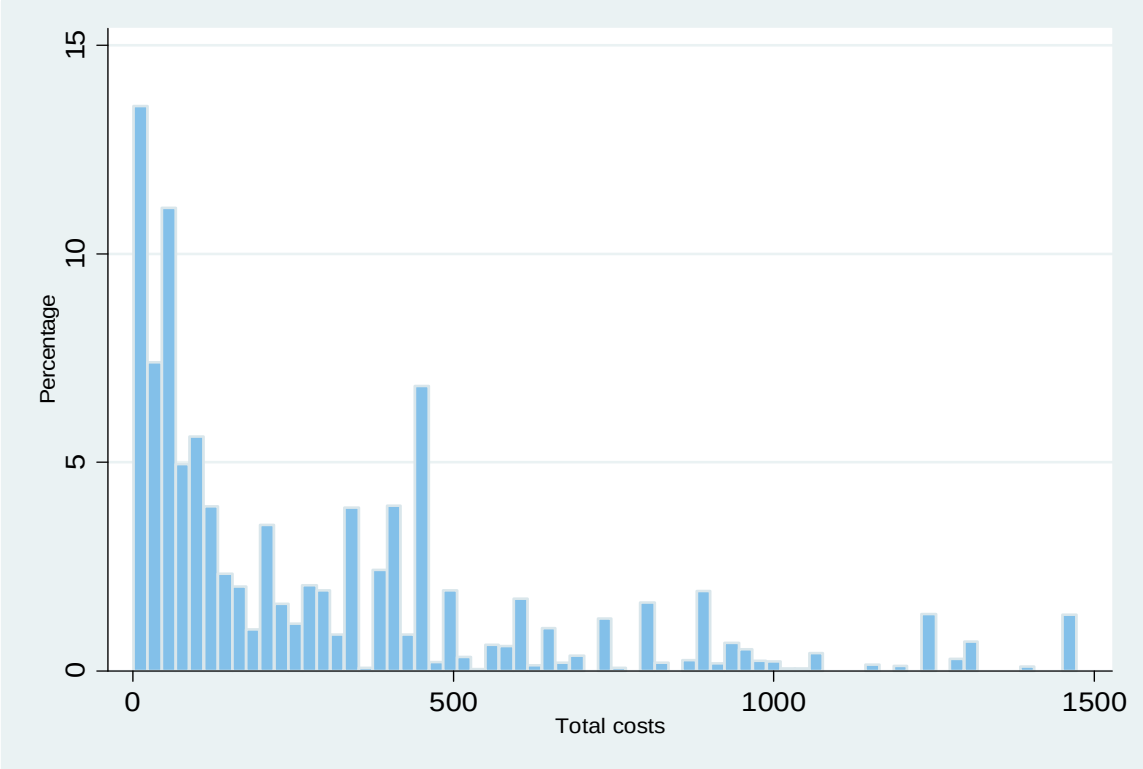
Table 4: Descriptive statistics of cost items for EU-17						
Cost item		**Minimum**	**10th percentile**	**Simple average**	**90th percentile**	**Maximum**
Replacement costs						
1	Travel	0	0	134	360	5,500
2	Transfers	0	0	23	50	1,879
3	Day trips	0	0	26	0	2,000
4	Accommodation	0	0	54	100	3,000
5	Other 'inclusive' components	0	0	45	150	1,360
6	Car rental	0	0	26	8	700
7	Other items	0	0	15	15	1,000
Illness and injury		0	0	6	0	7,000
Follow up costs						
1	Communication	0	0	14	30	500
2	Travel or accommodation	0	0	42	23	2,750
3	Legal	0	0	1	0	381
4	Other expert advice costs	0	0	2	0	700
Other 'out-of-pocket' costs		0	0	7	0	1,500
Total costs		0	0	521	1500	11,050

Note: This is based on question 19. This applies to respondents with problems and the number of respondents is 586. Observations are weighted such that they represent the age and gender structure of the population in each country. As a result the figures for EU-17 are effectively a weighted average of the country averages with population size used as weights. Notice that 'Total costs' are NOT calculated as the sum of the averages of each cost item.
Source: London Economics based on data from Ipsos MORI.

The simple average of the total costs[24] is estimated at €521. Figure 24 shows that the distribution of the total cost is skewed towards the left. In fact, a very large share of the respondents in all countries reported total costs of €0 because of the problem.

The simple average estimate may be influenced excessively by outliers. Therefore, as an alternative we exclude the top 10% and the bottom 10% of the total cost observations to calculate an adjusted average cost estimate. We do, however, acknowledge that the excluded observations could relate to real problems which implied real costs to consumers. The adjusted average total costs incurred as a result of the problem with the dynamic package are €319 for EU-17. This amounts to about 12% of the average value of the dynamic packages purchased.

Figure 24: Distribution of total costs associated with the problem (in €)



Note: This is based on question 19. This applies to respondents with problems and the number of respondents is 586. In the graphs are excluded respondents with no costs and respondents who had total costs of more than 1,500 Euros. Observations are weighted such that they represent the age and gender structure of the population in each country. As a result the figures for EU-17 are effectively a weighted average of the country averages with population size used as weights.
Source: London Economics based on data from Ipsos MORI.

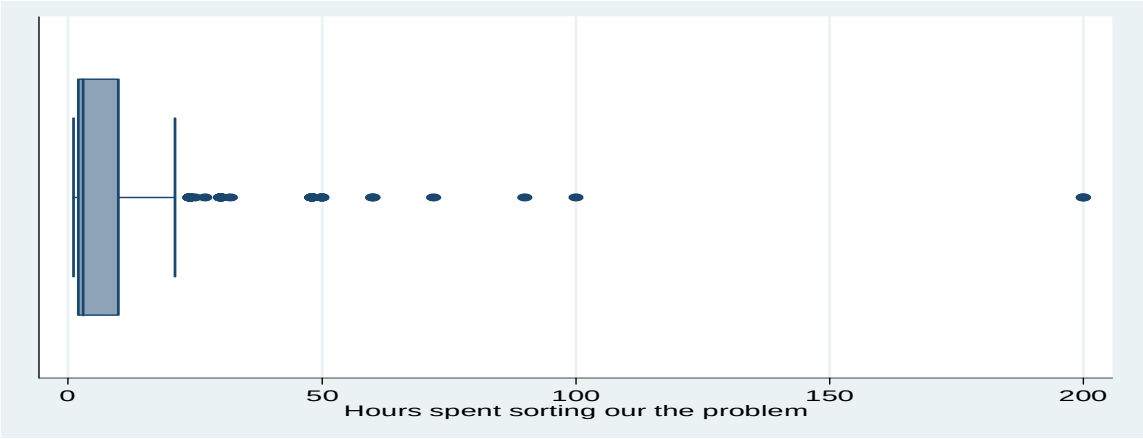
[24] Calculated as the weighted average of the sum of all cost items. Weights are assigned according to the ex-post stratification strategy.

5.3.4 Time spent solving the problem

Besides the financial costs the survey also asked respondents to estimate how many hours they had spent trying to sort out the problem.

Figure 25 shows a box plot of the responses. In most cases respondents said that they had spent less than 48 hours. However, in some cases respondents said that they had spent more than 48 hours sorting out the problem. This seems to be very much time and could suggest that these individuals have misunderstood the question and told us the time the problem *lasted* and not the time *spent actively* sorting out the problem. Therefore, we exclude observations of 48 hours or more from our estimates of the average time spent sorting out the problem.

Figure 25: Box plot of the time spent sorting out the problem (excluding respondents who spent no time sorting out the problem)



Note: This is based on question 20. This applies to the 586 respondents with problems. Observations are weighted such that they represent the age and gender structure of the population in each country. As a result the figures for EU-17 are effectively a weighted average of the country averages with population size used as weights.
Source: London Economics based on data from Ipsos MORI.

We estimate that respondents on average spend 6.11 hours sorting out the problem. As a test of the validity of our results we compare them to the results of 2000 OFT study on consumer detriment in the UK. According to our estimates UK respondents spent an average of 7.59 hours sorting out the problem. This is slightly more than the OFT estimate of 6.30 hours spent by UK respondents sorting out problems across all types of goods and services.

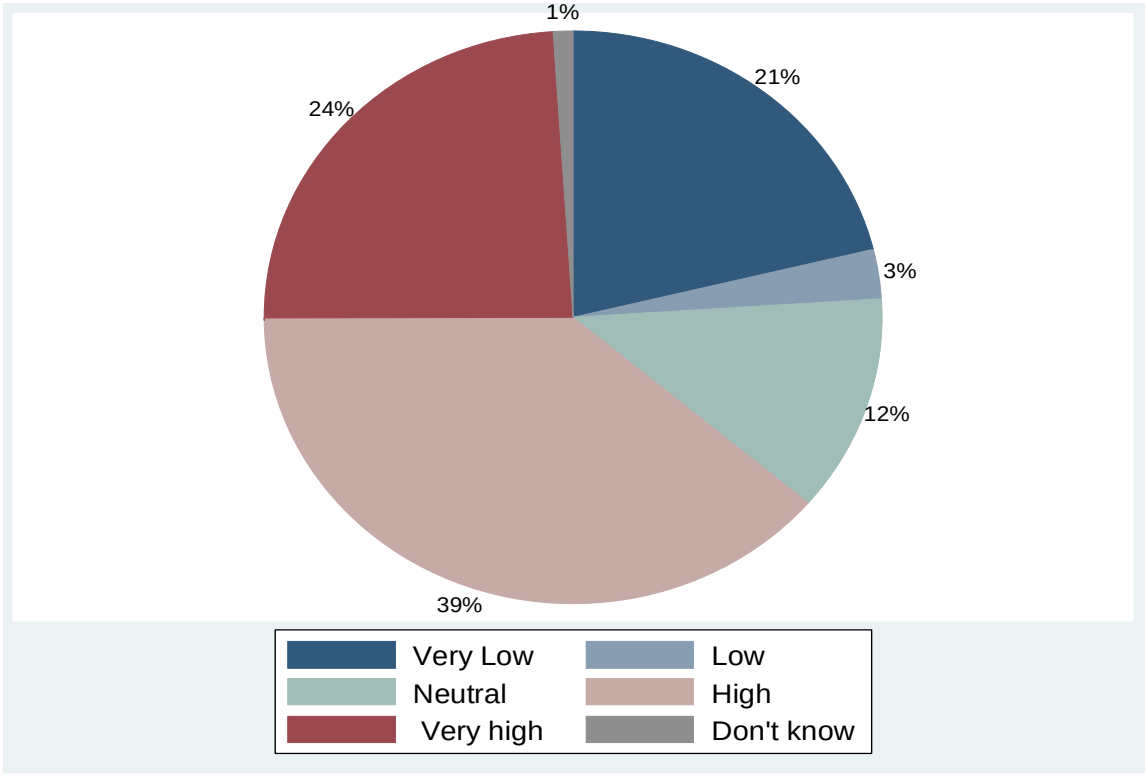
5.3.5 Emotional effects

Finally, respondents were asked about the psychological detriment suffered. In particular, the survey asked respondents to what degree they had experienced

negative emotional effects such as annoyance, frustration, stress and disappointment when the problem occurred and after it had been dealt with.

Sixty-three percent of respondents said that they had experienced high or very high negative emotional effects. This finding is well in line with that of Ipsos for recreational goods and services in Victoria, Australia. They find that 56% of respondents had experienced high or very high emotional costs because of the problem. We also find that 24% of respondents experienced low or very low negative emotional effects.

Figure 26: Degree of negative emotional effects when the problem occurred



Note: This is based on Question 26 of the questionnaire. This applies to 586 respondents with problems. Observations are weighted such that they represent the age and gender structure of the population in each country. As a result the figures for EU-17 are effectively a weighted average of the country averages with population size used as weights.
Source: London Economics based on data from Ipsos MORI.

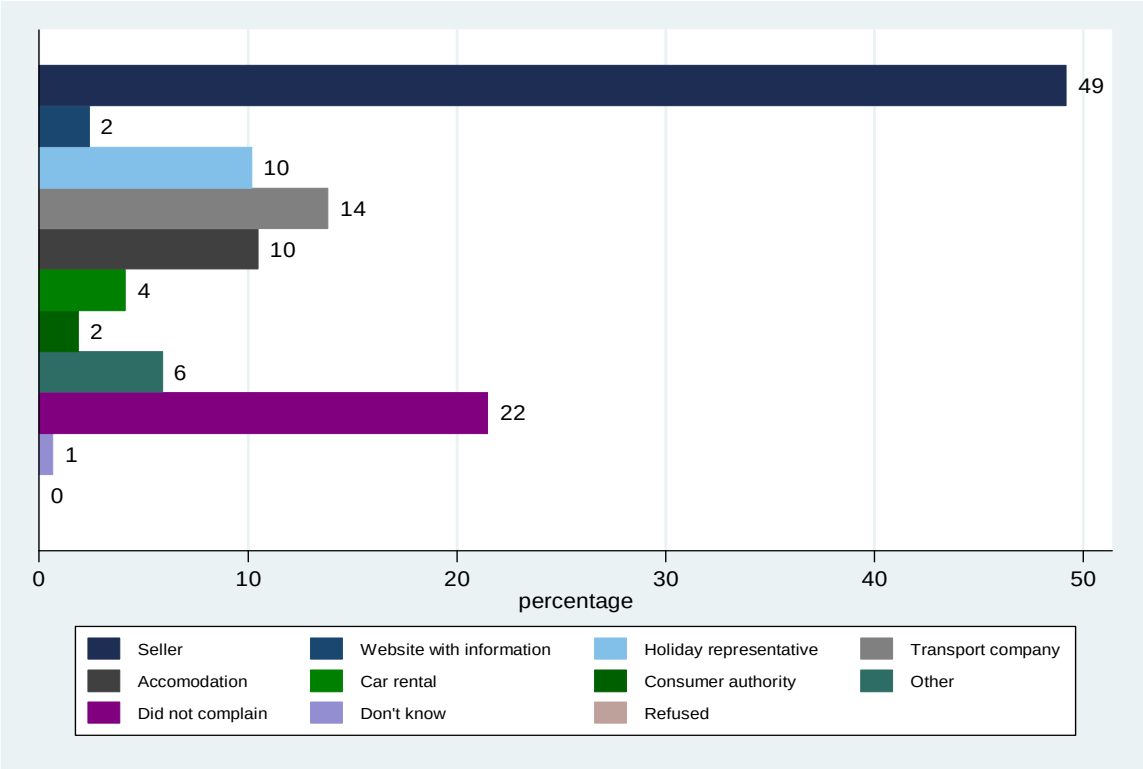
5.3.6 Compensation

In most cases it is necessary to complain in order to get any kind of compensation. However, survey results indicated that twenty-two percent of consumers who experience problems with dynamic packages do not complain to anyone (Figure 27). This figure is very similar to the 25% of respondents with problems related to

recreational goods and services who did not make a complaint in Victoria, Australia.[25]

If consumers complain most of them complain to the seller. In particular we estimate that 49% complain to the seller. Another 14% of EU-17 consumers with problems with dynamic packages complain to the transport company and 10% complain to a holiday representative or to the accommodation provider. This is similar to the finding by Ipsos in their study of consumer detriment in Victoria, Australia. They find that 69% of respondents with problems related to recreation and leisure including holiday travel complained to the seller.

Figure 27: Who were complaints directed to?

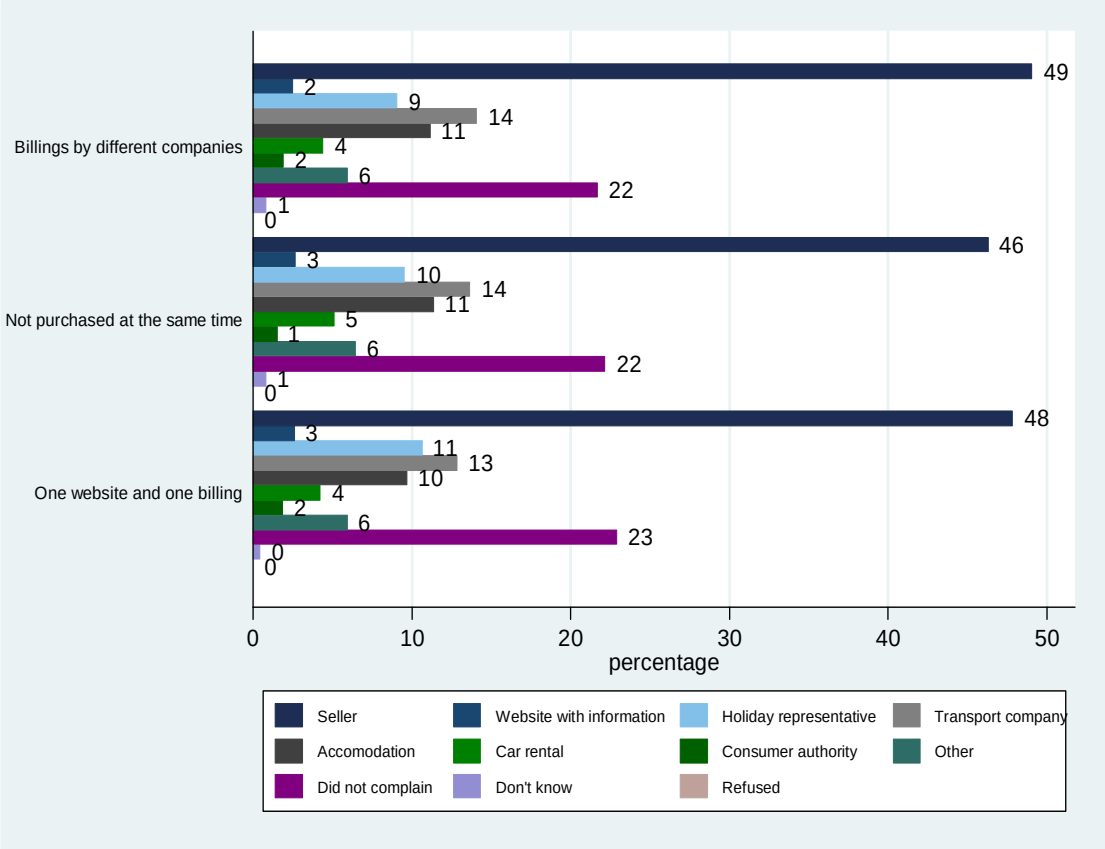


Note: This is based on Question 18 of the questionnaire. This applies to 586 respondents with problems. Observations are weighted such that they represent the age and gender structure of the population in each country. As a result the figures for EU-17 are effectively a weighted average of the country averages with population size used as weights.
Source: London Economics based on data from Ipsos MORI.

[25] According to a 2006 Ipsos study on consumer detriment

People seem almost equally likely to complain over packages with separate billings by different companies (22%), packages were all elements of the package were not purchased at the same time (22%) and packages purchased from one website and with one billing (23%). However, the differences are not large. Further, the pattern of who the complaints are addressed to is more or less the same for all types of packages (Figure 28). The complaint behaviour for packages within and outside the current scope of the Directive thus seems to be very similar.

Figure 28: Who were complaints directed to?
- for packages within and outside the scope of the Directive for EU17

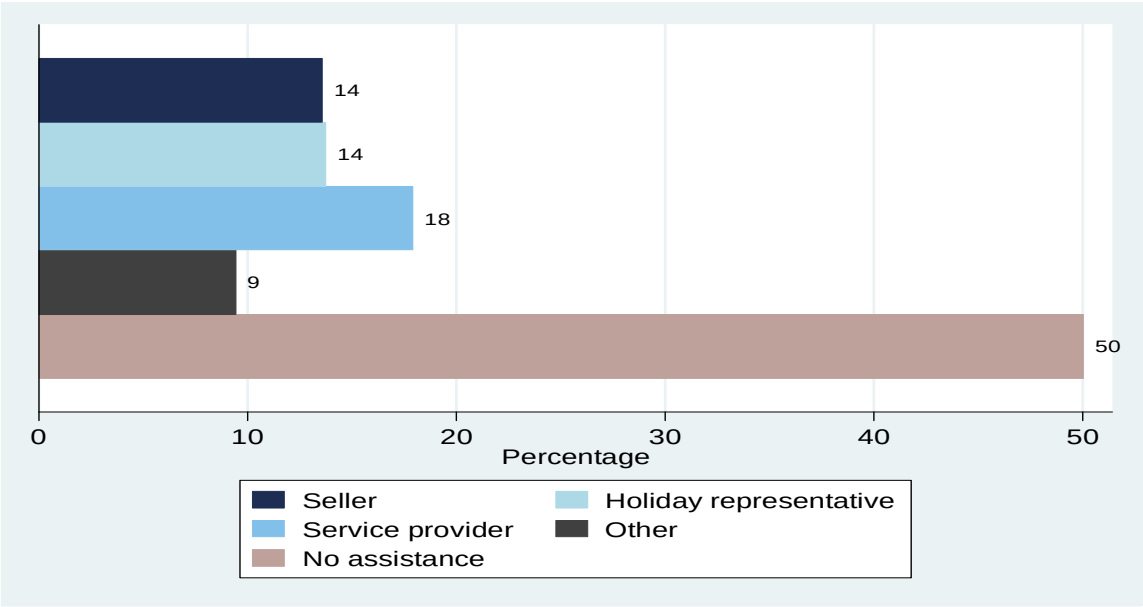


Note: This is based on Question 18 of the questionnaire. This applies to 586 respondents with problems. Observations are weighted such that they represent the age and gender structure of the population in each country. As a result the figures for EU-17 are effectively a weighted average of the country averages with population size used as weights.
Source: London Economics based on data from Ipsos MORI.

Fifty percent of customers with a problem in EU-17 received no assistance. If assistance was provided it was most likely to be provided by the service provider. The service provider offered assistance in 18% of the cases where a customer had a

problem with a dynamic package. The seller and holiday representatives each offered assistance in 14% of the cases.

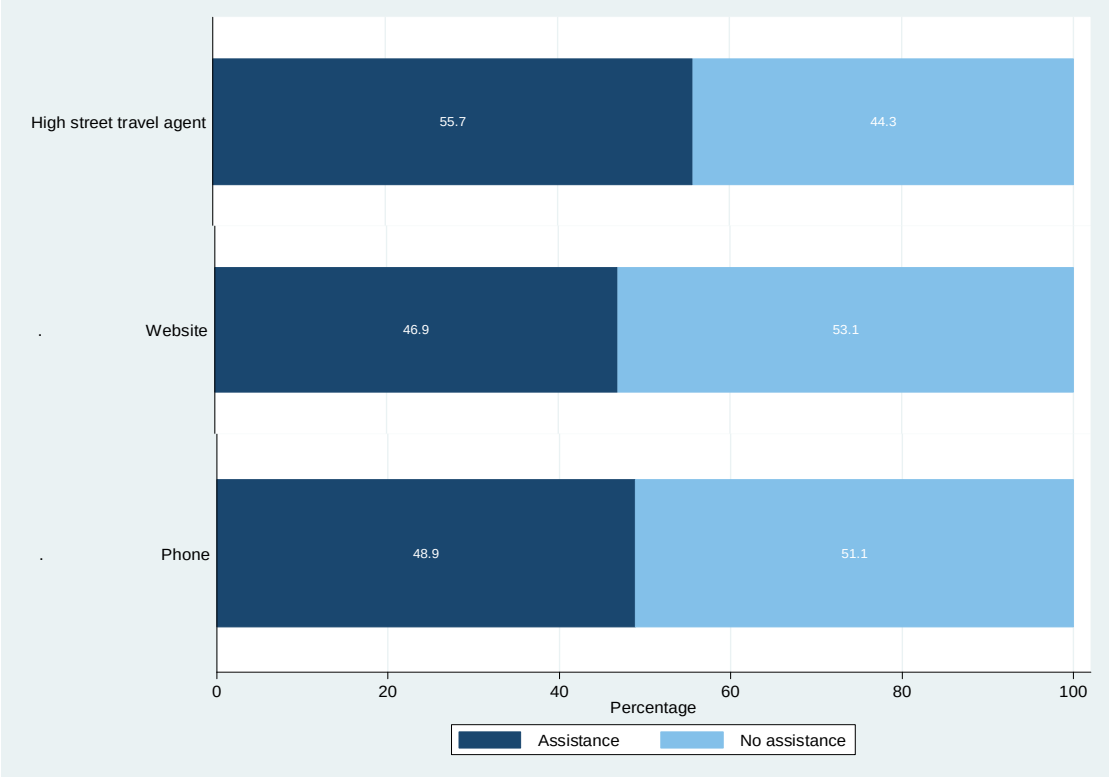
Figure 29: Did you receive assistance and from whom?



Note: This is based on Question 21 of the questionnaire. This applies to 586 respondents with problems. Observations are weighted such that they represent the age and gender structure of the population in each country. As a result the figures for EU-17 are effectively a weighted average of the country averages with population size used as weights.
Source: London Economics based on data from Ipsos MORI.

Assistance seems most likely to be provided if the package was purchased from a high street travel agent (56%), slightly less if it was purchased over the phone (49%), and least likely if the package was purchased from websites (47%).

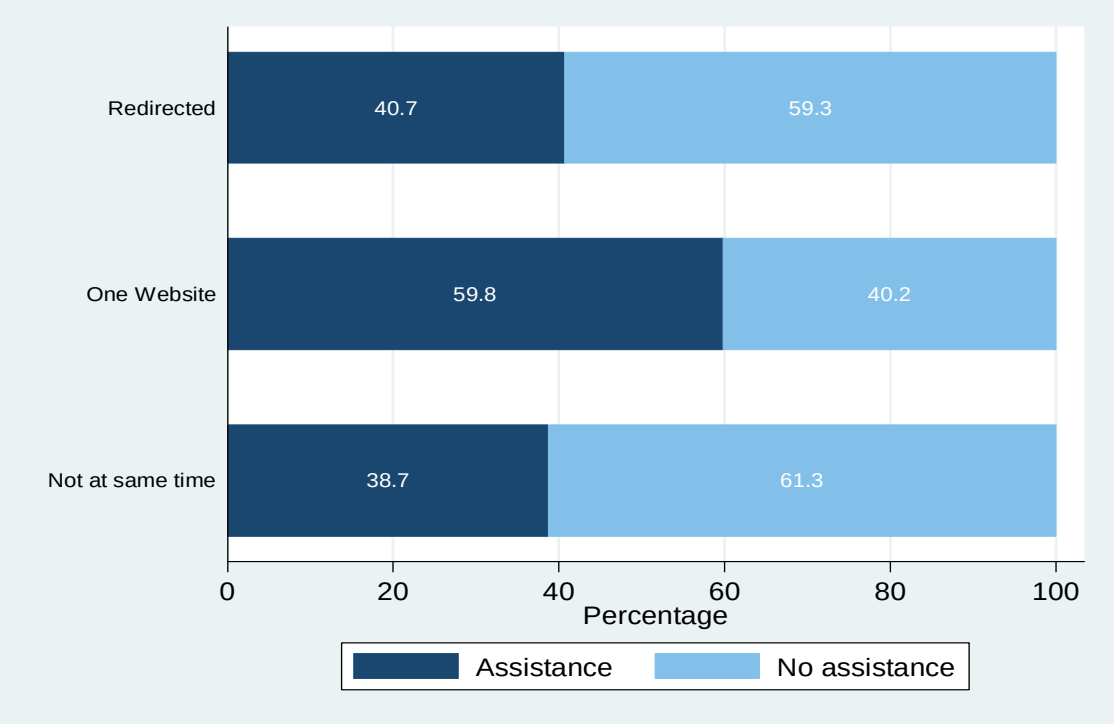
Figure 30: Availability of assistance by method of purchase for EU-17



Note: This is based on Question 21 and 11 of the questionnaire. The number of respondents with problems who would have been asked both of these questions, was 586. Observations are weighted such that they represent the age and gender structure of the population in each country. As a result the figures for EU-17 are effectively a weighted average of the country averages with population size used as weights.
Source: London Economics based on data from Ipsos MORI.

Furthermore, it seems that the likelihood of receiving assistance is highest if only one website is used to make the purchase (Figure 31). It is lower if the consumer is redirected between websites and even lower if all elements of the package are not purchased at the same time. In particular, 60% of respondents received assistance when only one website had been used, 41% if the respondent had been redirected, and only 39% if all components of the package had not been purchased at the same time.

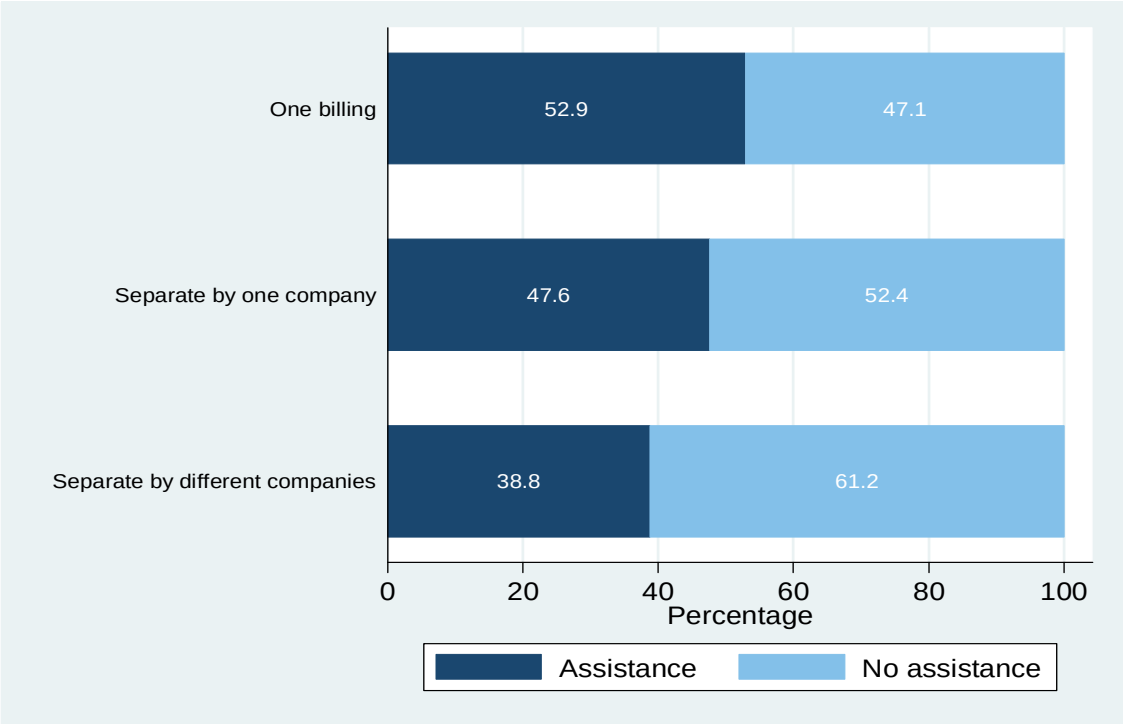
Figure 31: Availability of assistance by type of presentation (only applicable to purchases via the internet) – weighted average for EU17



Note: This is based on Question 21 and 14 of the questionnaire. This applies to respondents with problems who had used the internet to purchase the package i.e. to 241 respondents. The number of respondents is given in **Table 12**. Observations are weighted such that they represent the age and gender structure of the population in each country. As a result the figures for EU-17 are effectively a weighted average of the country averages with population size used as weights.
Source: London Economics based on data from Ipsos MORI.

Customers in EU-17 are more likely to receive assistance when a problem arises if they receive only one billing (53%) than if they receive several billings from the same company (48%) or from different companies (39%) (Figure 32). This is well in line with the fact that packages with only one billing are more likely to be within the current scope of the Directive than packages for which separate billings were received

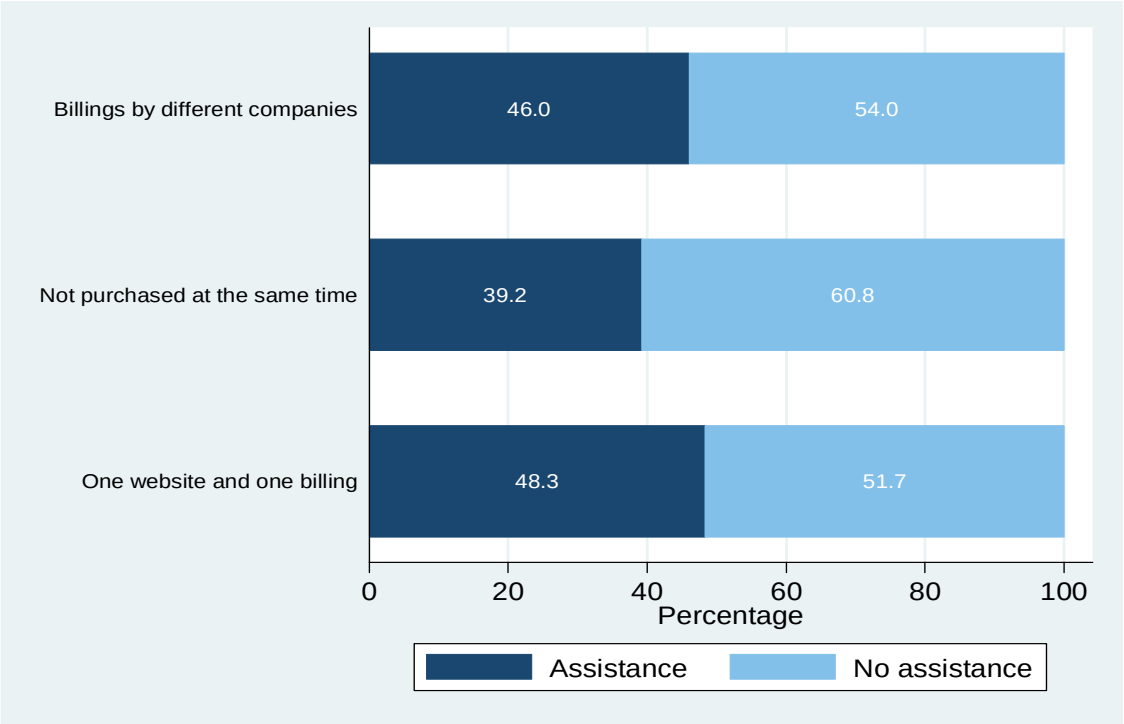
Figure 32: Availability of assistance by billing method – weighted average for EU17



Note: This is based on Question 21 and 15 of the questionnaire. The number of respondents with problems who would have been asked both of these questions was 586. Observations are weighted such that they represent the age and gender structure of the population in each country. As a result the figures for EU-17 are effectively a weighted average of the country averages with population size used as weights.
Source: London Economics based on data from Ipsos MORI.

Considering packages which appear to be within and outside the current scope of the Directive, it seems to be the case that packages inside the scope of the Directive purchased on one website and with one billing resulted in more assistance than packages outside the scope of the Directive (Figure 33). In particular, assistance was offered for packages purchased using one website and with one billing in 48% of the problematic cases at the EU-17 level. In comparison packages where all components were not purchased at the same time resulted in assistance in 39% of the cases and packages with billings by different companies resulted in assistance in 46% of the problematic cases.

Figure 33: Availability of assistance for packages within and outside the current scope of the Directive – weighted average for EU17

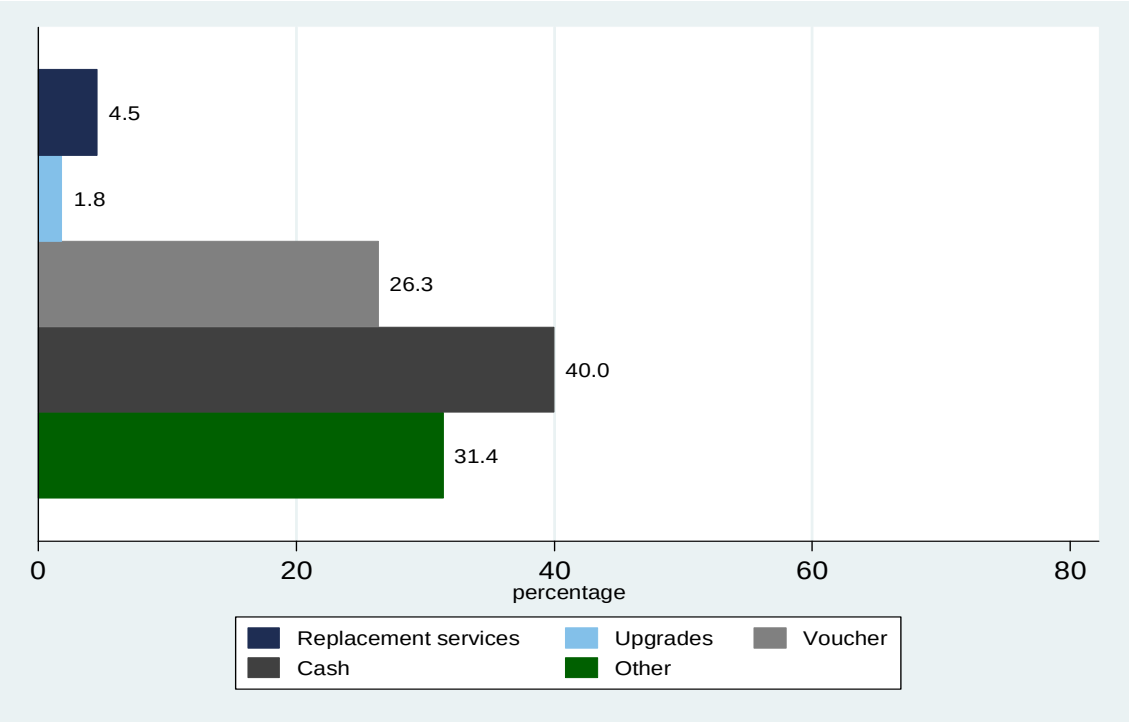


Note: This is based on Question 21, 12, 14 and 15 of the questionnaire. The number of respondents with problems who would have been asked both of these questions was 586. Observations are weighted such that they represent the age and gender structure of the population in each country. As a result the figures for EU-17 are effectively a weighted average of the country averages with population size used as weights.
Source: London Economics based on data from Ipsos MORI.

Although the majority (78%) of respondents across all survey countries complained about their problems, only a minority of 36% of the respondents who experienced problems asked for monetary or non-monetary compensation. Even fewer respondents (21%) actually received compensation.

Sixty-six percent of the compensation, which was offered, was given as either cash or vouchers (Figure 34). Only very little compensation was given as replacement services or upgrades. However, 31% of the respondents said that they received 'other' types of compensation. We emphasise that due to relatively few respondents for this question this does not necessarily reflect that many people chose this reply option. In most cases, if respondents said 'other', they had received a check, a discount, a promise of a discount at the next purchase, or a complimentary item or service. In a few cases respondents had received only an apology.

Figure 34: Type of compensation received - weighted average for EU-17

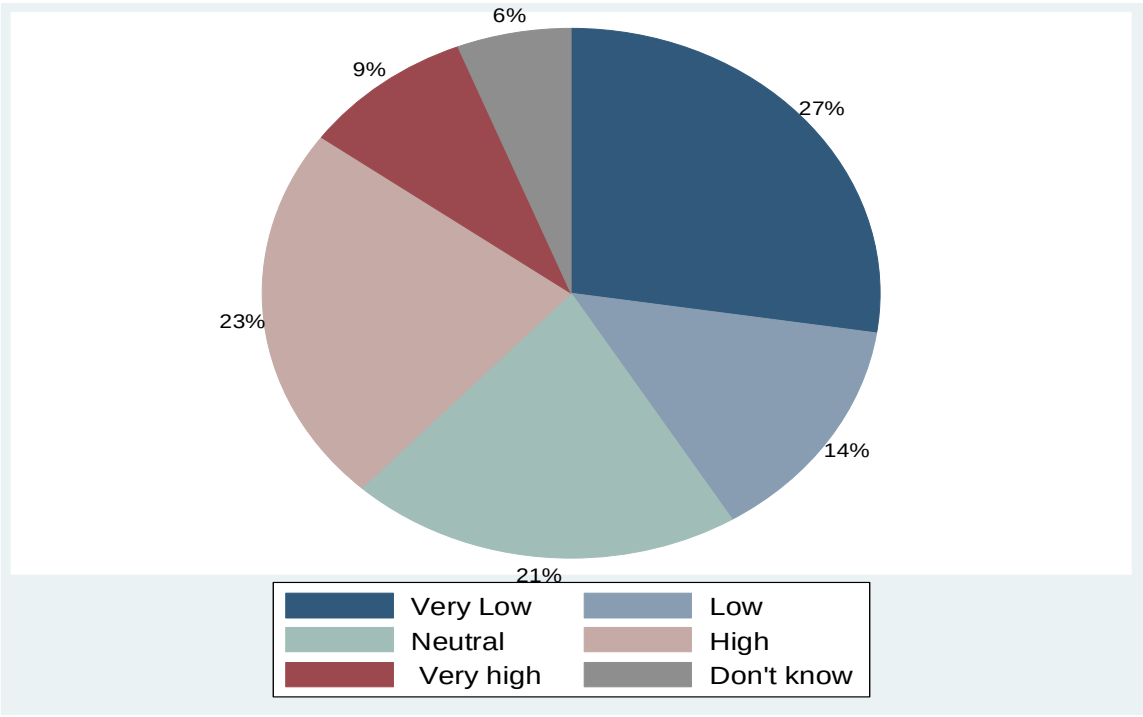


Note: This is based on Question 24 of the questionnaire. Question asked to respondents with a problem who received compensation. There were a total of 119 respondents to this question. Observations are weighted such that they represent the age and gender structure of the population in each country. As a result the figures for EU-17 are effectively a weighted average of the country averages with population size used as weights.
Source: London Economics based on data from Ipsos MORI.

Respondents who had received cash or vouchers were asked what the value of the compensation was. On average in EU-17 the value of the compensation offered to people who received cash or vouchers was €360. This estimate was based on a total of 67 respondents. However, given the low number of observations it is possible that the figure is influenced by outliers and that this does not accurately reflect the average value of compensation offered. Ideally we would like to eliminate outliers from the estimate but due to the very low number of responses in each of the survey countries it is very difficult to identify which observations are outliers.

Respondents who had received assistance and/or compensation were asked to rate the negative emotional effects once the problem had been dealt with. A comparison of Figure 26 and Figure 35 reveals that assistance and/or compensation was successful at reducing the degree of negative emotion associated with the problem. A similar conclusion is found in the 2000 OFT study of consumer detriment. Further, the conclusion holds for all countries in the sample except for Slovenia.

Figure 35: Degree of negative emotional effects when the problem had been dealt with



Note: This is based on Question 27 of the questionnaire which applied to respondents with problems who had received assistance and/or compensation. The number of relevant respondents was 339. Observations are weighted such that they represent the age and gender structure of the population in each country. As a result the figures for EU-17 are effectively a weighted average of the country averages with population size used as weights.
Source: London Economics based on data from Ipsos MORI.

5.4 Perception of consumer protection

In order to get an idea about the level of consumer protection that consumers think they have in relation to different types of travel arrangements, we asked consumers to imagine that the seller or one of the service providers of the package went bankrupt before the beginning of the holiday. Respondents were asked whether they thought that their money would be lost or if they thought they would be entitled to a refund from a travel fund or from the seller/service provider.

If consumers are aware that package holidays are associated with higher levels of financial protection than other types of travel arrangements, it should be the case that consumers on average are more optimistic about the prospects of getting a refund for traditional travel packages than for dynamic packages or independent travel arrangements.

Figure 36 illustrates the responses for people who had experienced some kind of problems with i) traditional packages, ii) dynamic packages, or iii) independent travel arrangements for the same trip.

For dynamic packages it suggests that only 12% of consumers thought that their money would be lost in case of bankruptcy. This is surprisingly low given that many types of dynamic packages (e.g. those not purchased at the same time and those with separate billings) do not appear to fall under the current scope of the Directive. Twenty-eight percent of respondents thought that they would be entitled to a refund from a travel fund and 53% thought that they would be entitled to a refund from the seller/service provider.

These figures could indicate that consumers do not understand that some types of dynamic packages are not covered by the Directive and that financial protection therefore is somewhat limited. However, it may not be the case that consumers are mistaken about the level of consumer protection. Some countries have additional consumer protection schemes, for instance Denmark, and the Netherlands. In Denmark the travel fund, Rejsegarantifonden, provides wider coverage than the Directive[26].

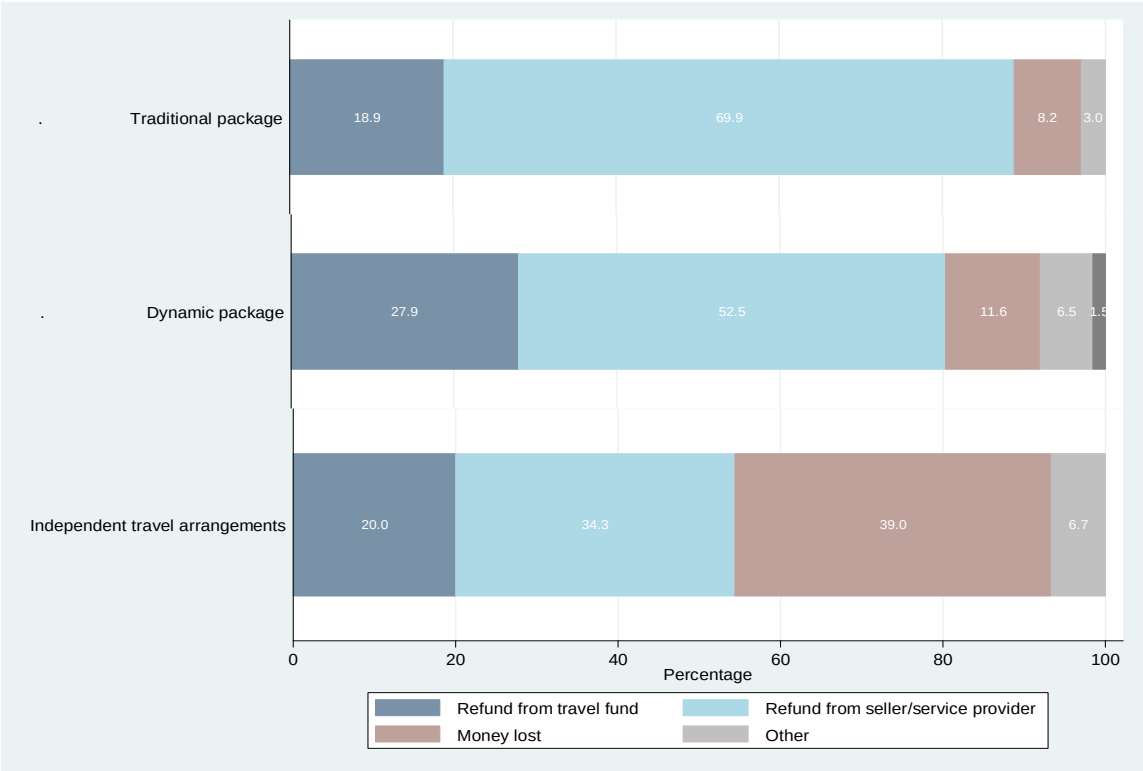
If we compare the perception of consumer protection for dynamic packages with the perception of consumer protection for traditional packages and independent travel arrangements for the same trip, we can get an indication of the perception of consumer protection for dynamic packages **relative** to other types other types of travel arrangements.

Generally, it seems that consumers in the survey countries believe that they would be most likely to receive a refund if they purchase a traditional package and least likely to receive a refund if they make independent travel arrangements (Figure 36). This suggests that consumers overall understand that the level of consumer protection is higher for package holidays than for non-packaged holidays.

In particular, more people thought that they would be entitled to a refund from the seller or service provider if the holiday was a traditional package (69.9%) than if it was a dynamic travel package (52.5%). Respondents who had had problems with independent travel arrangements found it least likely that they would receive a refund the seller or service provider (34.3%). Interestingly, however, nearly the same share of people believe that they would receive a refund from a travel fund for traditional packages (18.9%) and independent travel arrangements (20%) and a larger share of people believed that they would be entitled to a refund from a travel fund for dynamic packages (27.9%).

[26] The hypothesis seems somewhat supported by the fact that 82% of Danish consumers and 83% of Dutch think they are entitled to a refund either from a travel fund or from the seller. For EU-17 this figure is only 78%. Furthermore 65% of Danish consumers think they are entitled to a refund from a travel fund, compared to 29% for EU-17.

Figure 36: Perception of consumer protection when respondents had experienced problems by type of package for EU-17



Note: This is based on question 16 of the questionnaire. The averages are based only on problematic cases. The number of respondents for each type of travel arrangements is given in Table 5. Observations are weighted such that they represent the age and gender structure of the population in each country. As a result the figures for EU-17 are effectively a weighted average of the country averages with population size used as weights
Source: London Economics based on data from Ipsos MORI.

As already noted on several occasions consumers do not seem to have a good understanding of what constitutes a package and some of the consumers who have answered the survey might not have bought a dynamic package but rather a traditional travel package or independent travel arrangements.

In addition, the actual level of consumer protection depends on the type of dynamic package purchased and some of the consumers who have bought dynamic packages would probably be covered by the Directive while others would not. The actual level of financial protection depends on the type of travel arrangements purchased and whether it can qualify as a 'package' as defined in the Directive (see 2.1.2).

Suppose that consumers understand the level of financial protection related to different types of dynamic packages. Then we would expect to see a clear difference in the perception of financial protection between packages currently within the scope

of the Directive and packages currently outside the scope of the directive. If consumers understand well when dynamic packages are protected and when they are not, then they are able to make informed purchasing decisions taking the level of consumer protection into account.

In order to analyse whether consumers understand the level and structure of financial protection for dynamic packages we show the perception of consumer protection separately for two types of packages which most likely fall outside the current scope of the Directive:

- dynamic packages with separate billings issued by different companies; and
- dynamic packages where all components of the package were not purchased at the same time.

At the opposite extreme are packages with only one billing and purchased using only one website.

Figure 37 shows the perception of consumer protection for all three cases. It shows that consumers accept approximately the same level of financial protection for both of the types of packages which appear to be outside the current scope of the Directive (packages with different billings by separate companies, and packages not purchased at the same time). In particular, for both types of packages at least 67% expect to receive a refund either from a travel fund or from the service provider/seller. However, there is a slight tendency that people are more likely to expect the refund from a travel fund for packages where all components were not purchased at the same time than for packages with different billings from different companies. In particular, for packages with separate billings 24% expect a refund from a travel fund and 44% expect a refund from the seller/service provider. The corresponding figures for packages where all elements were not purchased at the same time are 28% and 39% respectively.

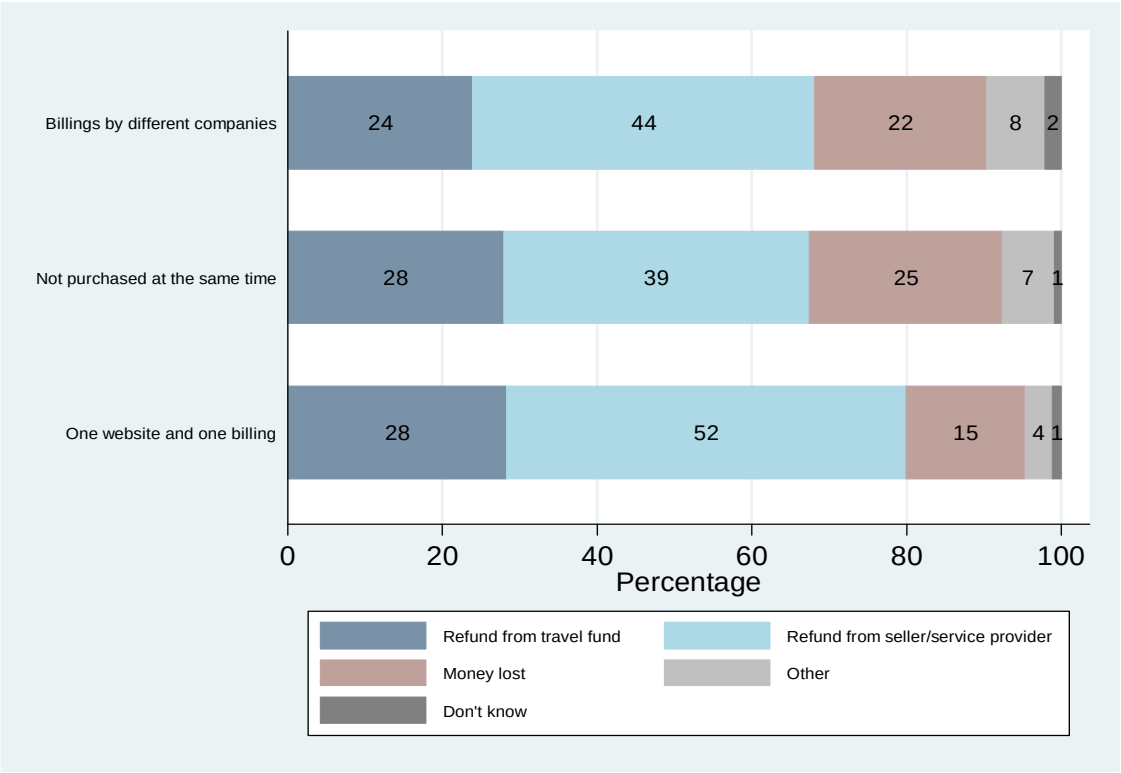
The most interesting comparison is, nevertheless not between the packages outside the scope of the Directive but between these types of packages and packages with only one billing and purchased from only one website. The former packages seem to be outside the current scope of the Directive whereas the latter seems to be within the scope of the Directive.

Generally, a larger share of consumers expect a refund from either a travel fund or the seller/service provider for packages purchased from one website with only one billing than for the other two types of packages considered here. The weighted average for EU-17 indicates that 80% expects a refund. The corresponding figures for packages with separate billings from different companies and for packages were all components were not purchased at the same time are 68% and 67% respectively.

This indicates that consumers are, at least to some extent, aware that the level consumer protection is greater for packages currently within the scope of the Directive than for packages currently outside the scope of the Directive. However,

the differences are not as pronounced as one might expect and very large shares of the population believe that they are entitled to a refund even for packages currently outside the scope of the Directive.

Figure 37: Perception of consumer protection in case of bankruptcy of the seller or one of the service providers for dynamic packages clearly outside or inside the scope of the Directive



Note: This is based on Question 16, 15 and 14 of the questionnaire. Table 11 shows the total number of respondents for each country for these questions. Question was referred to most recent occasion using a dynamic package unless respondents had experienced a problem in which case the respondent was asked to refer to the most recent occasion on which he/she had experienced a problem. Observations are weighted such that they represent the age and gender structure of the population in each country. As a result the figures for EU-17 are effectively a weighted average of the country averages with population size used as weights.
Source: London Economics based on data from Ipsos MORI.

5.5 Comparison of problematic travel arrangements

This section compares experiences with dynamic packages to experiences with traditional packages and independent travel arrangements for the same trip. In particular, we compare the characteristics of the packages, the incidence of problems, and the magnitude of problems.

Before we discuss the survey results two notes about the survey design are appropriate. Firstly, only respondents who had not experienced problems with dynamic packages were asked about their experiences with other travel arrangements within the last 2 years. Secondly, only respondents who had experienced problems with traditional packages and/or independent travel arrangements were asked to provide details about the characteristics of the package. Therefore, our comparison is of problematic travel arrangements.

5.5.1 Incidence of purchase

The survey asked respondents if they had made other types of joint travel arrangements within the last 2 years. In particular, respondents were asked about their experiences with traditional packages and independent travel arrangements.

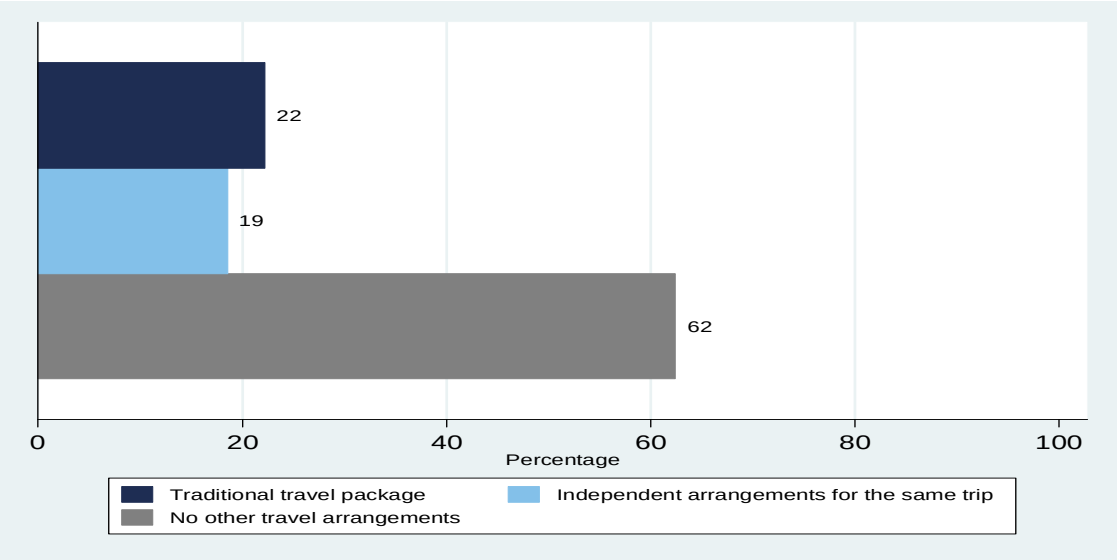
On average in EU-17, 62% of those who had used dynamic packages within the last 2 years (and not experienced a problem) had not used any other types of travel arrangements within that period. Twenty-two percent of the consumers had also used traditional packages within the last 2 years and 19% had made independent travel arrangements for a holiday.

At the outset this finding would seem to suggest that independent travel arrangements and traditional packages both have a smaller share of the market than dynamic packages because all respondents had purchased dynamic packages. However, in our view such a conclusion cannot be based on the available survey data. The problem is that the survey sample is not a random sample of the general population. Instead it consists of only individuals who have purchased dynamic packages and had not experienced problems with dynamic packages within the last 2 years. It is likely that the people in the sample on average prefer dynamic package holidays to other traditional packages and independent travel arrangements. On this basis we expect that the incidence of use of these other types of travel arrangements might be lower in the sample than in general among people who travel.

Similarly, we might expect that respondents who experience problems with dynamic packages on average travel more than other respondents because a high travel activity in a given time period raises the probability of having experienced problems in that time period. As a result, we might underestimate the incidence of purchase of the two other types of travel arrangements because questions related to the experience with these types of travel arrangements were only asked to respondents who had not had problems with dynamic packages.

Among those respondents who had made other types of joint travel arrangements, independent travel arrangements were most common in the UK, Greece, Ireland, Finland, Sweden and Spain. In all other countries more respondents had used traditional packages than independent travel arrangements.

Figure 38: Purchase of other travel arrangements by respondents



Note: This is based on Question 28 of the questionnaire. The number of responses is given in **Table 11**. This question was asked only to respondents who had not experienced any problems with the dynamic package. Notice that the groups are not mutually exclusive. Observations are weighted such that they represent the age and gender structure of the population in each country. As a result the figures for EU-17 are effectively a weighted average of the country averages with population size used as weights.
Source: London Economics based on data from Ipsos MORI.

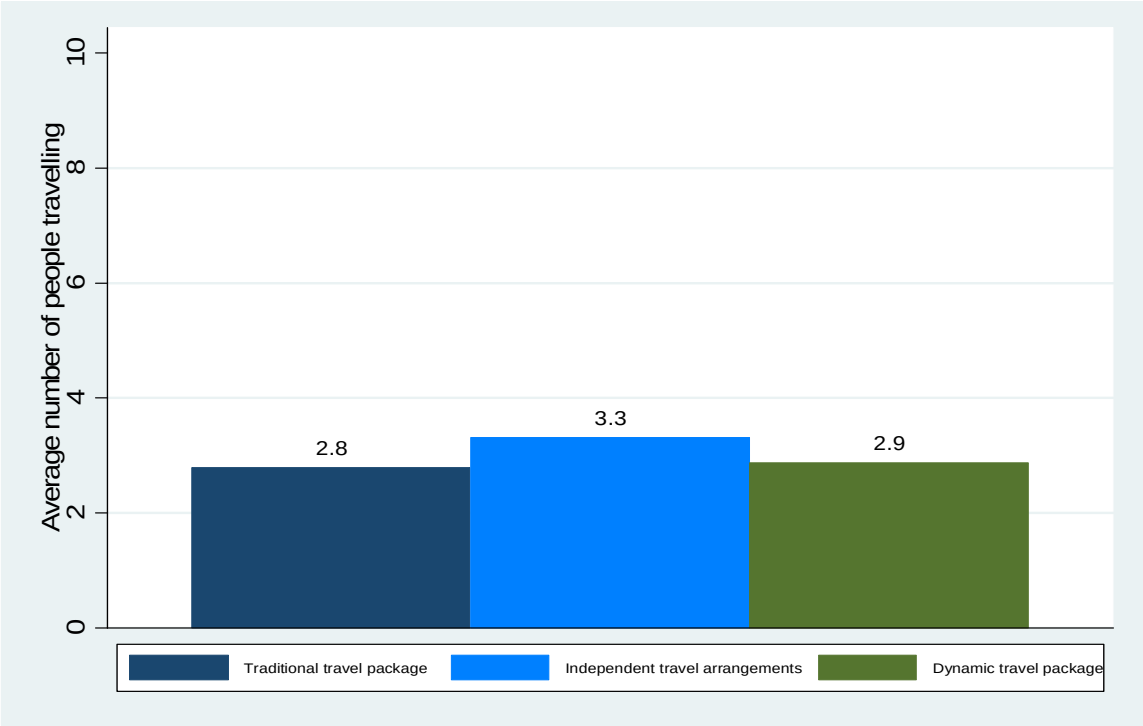
5.5.2 Characteristics of the travel arrangements

This section considers details of the experiences with problematic traditional packages and independent travel arrangements. We compare the survey results for these two types of travel arrangements with the corresponding survey results for problematic dynamic packages.

Number of people travelling

A comparison of the average number of travellers on problematic traditional travel packages; independent travel arrangements; and dynamic packages gives suggests that traditional travel packages are used for slightly smaller parties on average than dynamic packages and independent travel arrangements. Independent travel arrangements seem to involve slightly larger holiday parties than the other two types of travel arrangements.

Figure 39: Average number of people travelling as part of the trip when a problem occurred by type of package

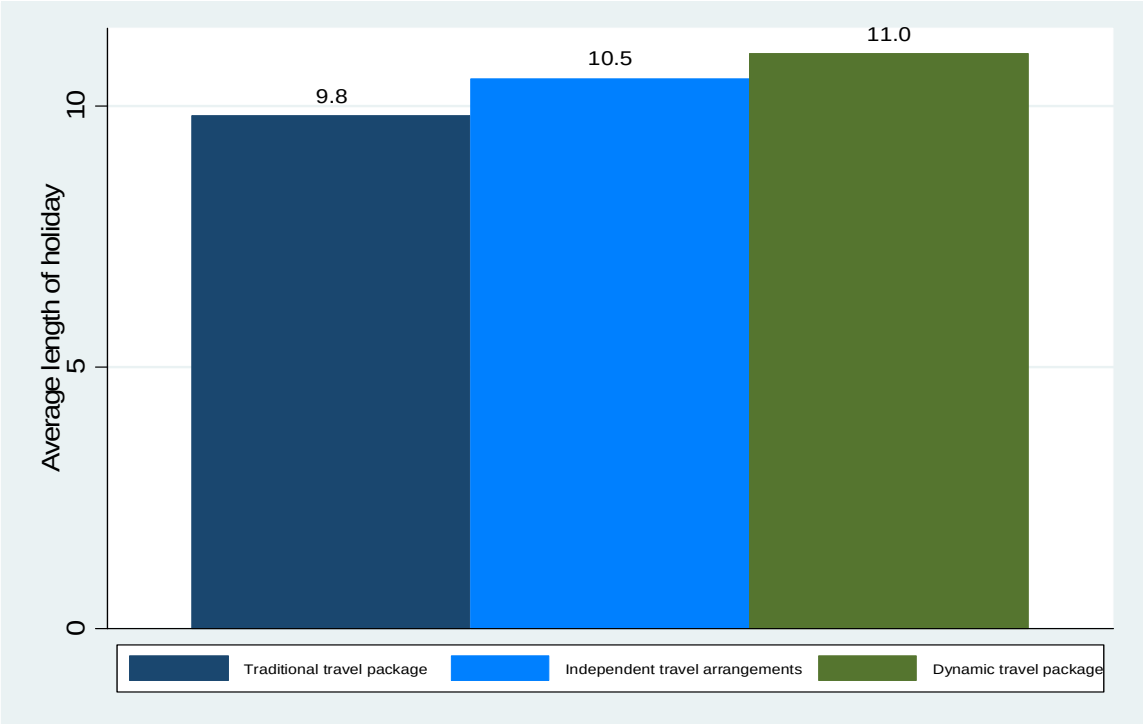


Note: This is based on question 9 of the questionnaire. The averages are based only on problematic cases. The number of respondents for each type of travel arrangements is given in Table 5. Observations are weighted such that they represent the age and gender structure of the population in each country. As a result the figures for EU-17 are effectively a weighted average of the country averages with population size used as weights.
Source: London Economics based on data from Ipsos MORI.

Length of holiday

There is a tendency that independent travel arrangements or dynamic packages are preferred for long holidays (Figure 40). This could be due to the flexibility inherent in these types of travel arrangements. In particular, the average length of a traditional package holiday is 9.8 days, the average length of a holiday of independent travel arrangements is 10.5 days and the average length of dynamic package holiday is 11.0 days.

Figure 40: Length of holiday when problem occurred by type of package

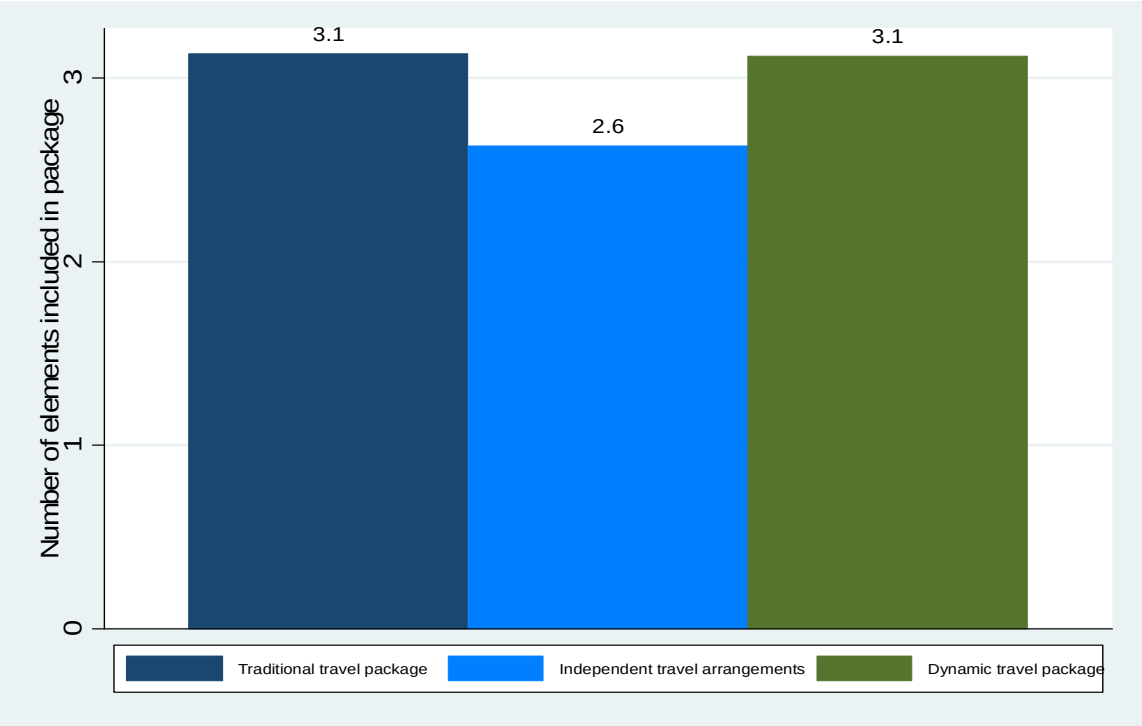


Note: This is based on question 10 of the questionnaire. The averages are based only on problematic cases. The number of respondents for each type of travel arrangements is given in Table 5. Observations are weighted such that they represent the age and gender structure of the population in each country. As a result the figures for EU-17 are effectively a weighted average of the country averages with population size used as weights.
Source: London Economics based on data from Ipsos MORI.

Components included

Figure 41 seems to indicate that traditional packages and dynamic packages on average include about 3.1 components while independent travel arrangements include only 2.6 components on average.

Figure 41: Number of elements included in the holiday when a problem occurred by type of package



Note: This is based on question 13 of the questionnaire. The averages are based only on problematic cases. The number of respondents for each type of travel arrangements is given in Table 5. Observations are weighted such that they represent the age and gender structure of the population in each country. As a result the figures for EU-17 are effectively a weighted average of the country averages with population size used as weights.
Source: London Economics based on data from Ipsos MORI.

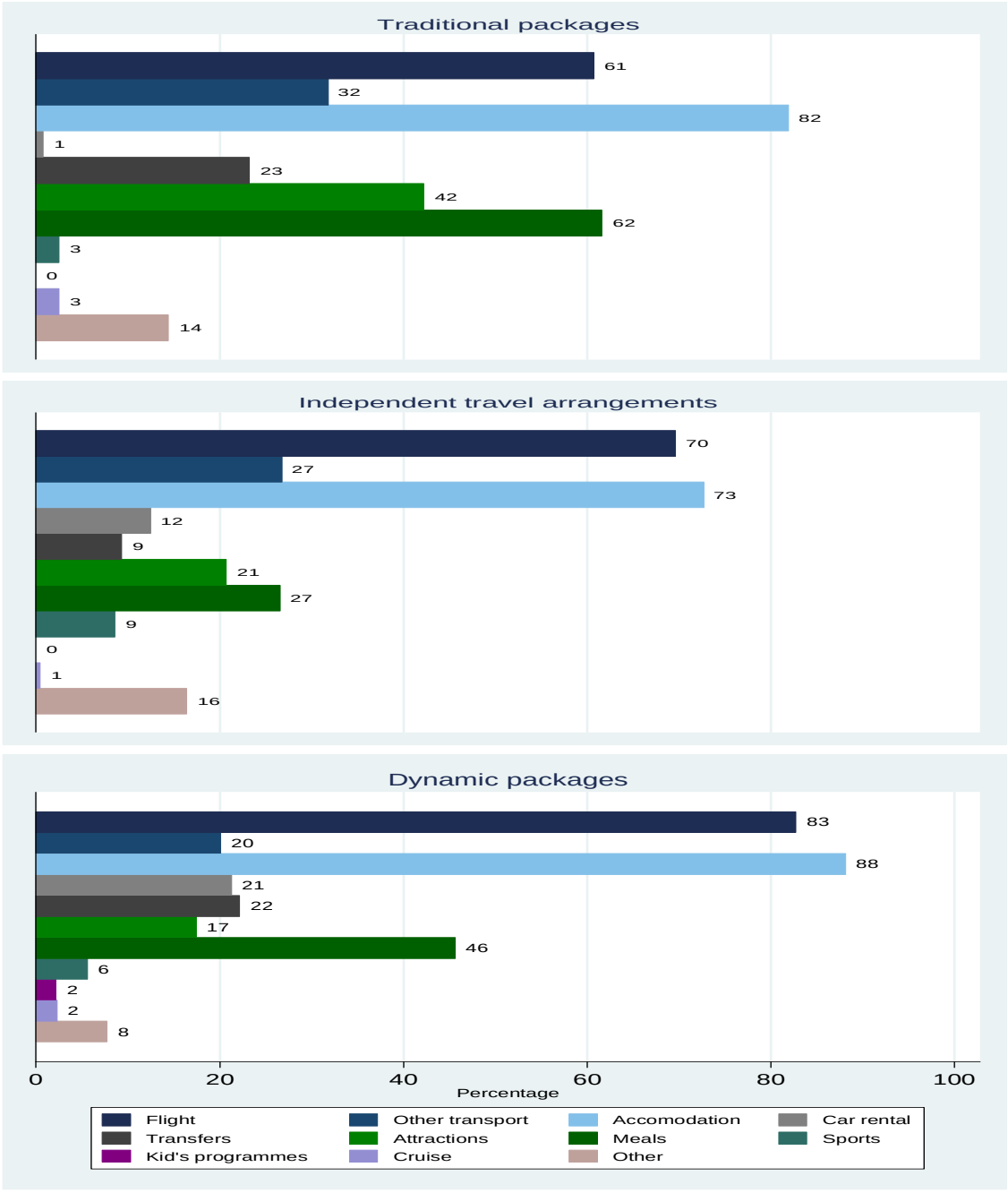
When we consider Figure 42 clearly accommodation, flights and flight dominate regardless of what type of travel arrangements we are considering.

Traditional packages are more likely than dynamic packages to contain meals, other transport, attractions and transfers. However, traditional packages also less frequently contain flights, car rental and accommodation.

Similarly, it seems that independent travel arrangements more often contain sports than dynamic packages and traditional packages. However, all other components are less frequently included in independent travel arrangements than in dynamic or traditional packages. This indicates that independent travel arrangements contain fewer components than other holiday arrangements.

In most cases, if respondents said 'other', the response could have been re-categorised into one of the provided options. As in the case of dynamic packages the most important option not provided in the question is travel insurance.

Figure 42: Components included in packages which caused problems



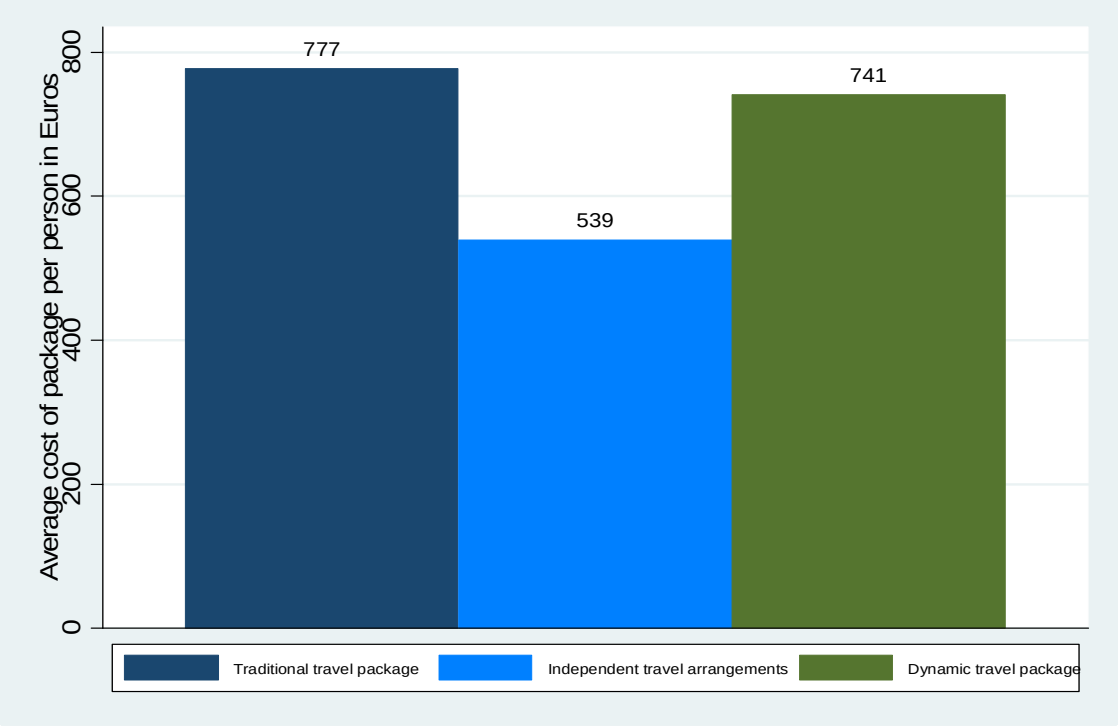
Note: This is based on Question 13 of the questionnaire. The number of respondents with problems is given in. Table 5. Question was referred to the most significant occasion on which he/she had experienced a problem. The elements are not mutually exclusive. Observations are weighted such that they represent the age and gender structure of the population in each country. As a result the figures for EU-17 are effectively a weighted average of the country averages with population size used as weights.

Source: London Economics based on data from Ipsos MORI.

Value of package per person

At the aggregate EU-17 level traditional travel packages on average cost slightly more than dynamic packages which cost somewhat more than independent travel arrangements (Figure 43). It might be that consumers who spend much money on their holiday choose a traditional package because of the financial security involved. However, the finding could also reflect that there is a cost to providing the financial protection and the liability which must be covered by consumers and as such it might not reflect a deliberate choice by consumers.

Figure 43: Total value per person of travel arrangements when a problem occurred by type of travel arrangement



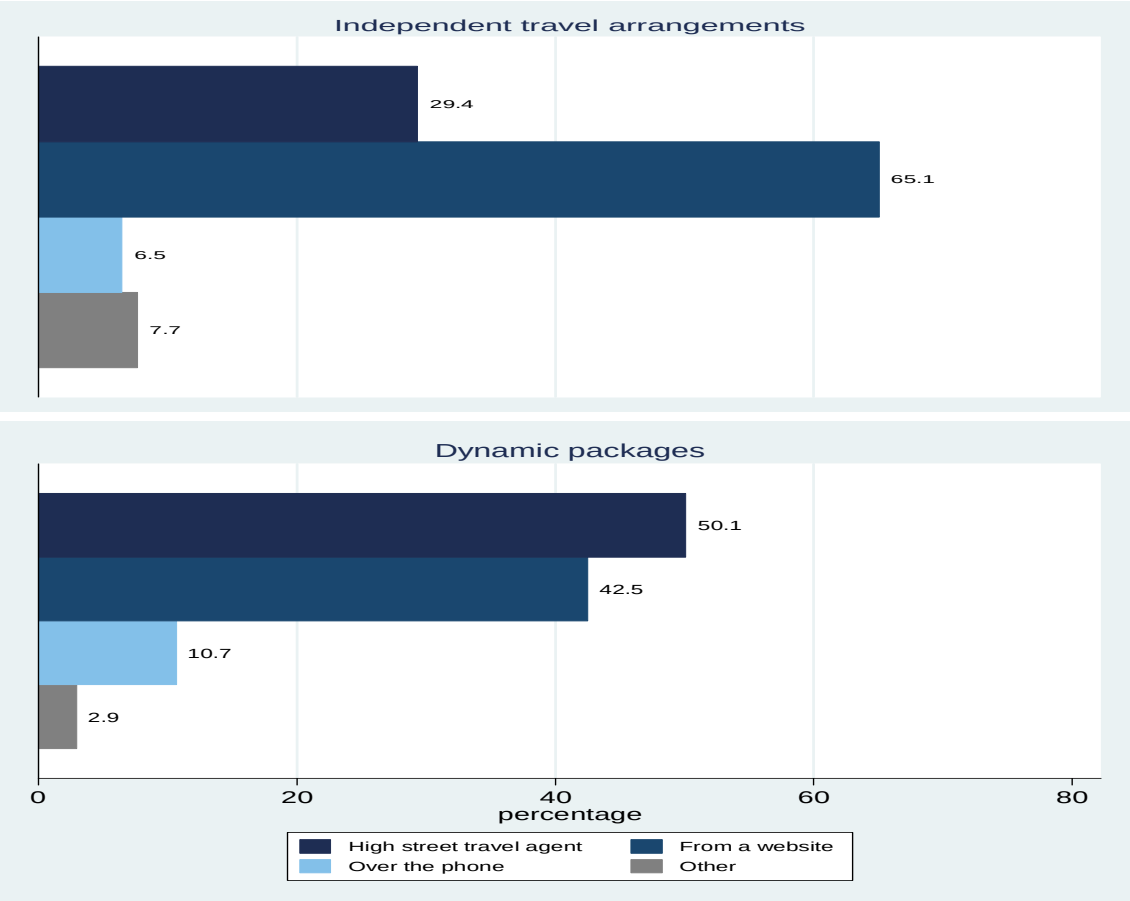
Note: This is based on question 16 of the questionnaire. The averages are based only on problematic cases. The number of respondents for each type of travel arrangements is given in Table 5. Observations are weighted such that they represent the age and gender structure of the population in each country. As a result the figures for EU-17 are effectively a weighted average of the country averages with population size used as weights.
Source: London Economics based on data from Ipsos MORI.

Sales channel

The survey asked respondents who had experienced problems with **independent travel arrangements** details of the purchasing process. Most respondents had purchased the holiday via the internet and/or using high street travel agents. Sixty-

five percent of respondents had used the internet to make the travel arrangements and the internet was thus the most common point of purchase. In comparison only 43% of consumers who had purchased dynamic packages had used the internet.

Figure 44: Sales channel for travel arrangements which caused problems



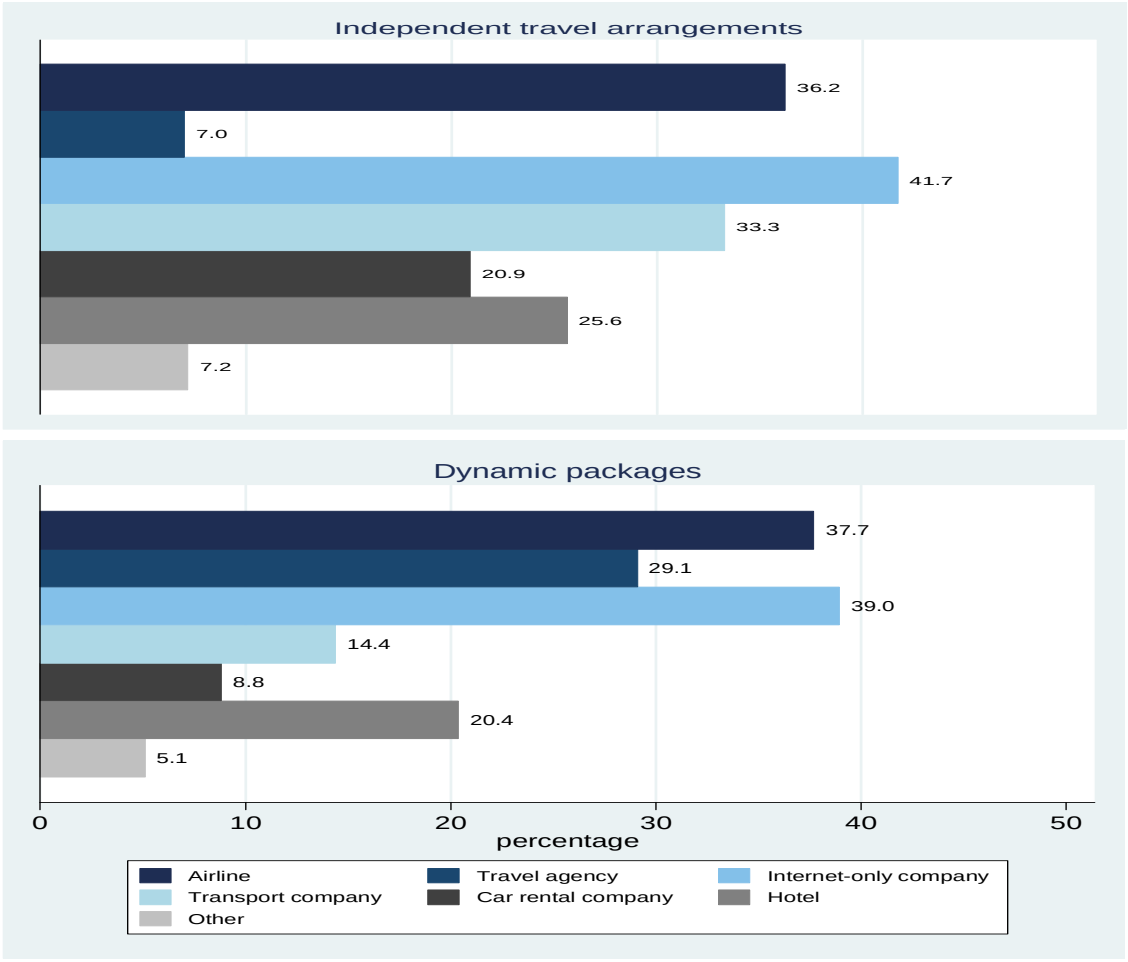
Note: This is based on question 11 of the questionnaire. The number of respondents is given in Table 5. Observations are weighted such that they represent the age and gender structure of the population in each country. As a result the figures for EU-17 are effectively a weighted average of the country averages with population size used as weights
Source: London Economics based on data from Ipsos MORI.

Websites used

Respondents who had used websites to make the travel arrangements had used a wide range of websites as indicated by Figure 45. Forty-two percent of those who had made independent travel arrangements had used the website of an internet-only company such as expedia. In comparison for dynamic packages the corresponding figure is 39%. Generally, those who had made independent travel arrangements more frequently had used all the different types of websites than those who had purchased

dynamic packages with the exception of airline websites and websites of travel agents.

Figure 45: Websites which have been used to purchase the travel arrangements



Note: This is based on question 12 of the questionnaire. The number of respondents is given in **Table 13** and Table 12. Observations are weighted such that they represent the age and gender structure of the population in each country. As a result the figures for EU-17 are effectively a weighted average of the country averages with population size used as weights

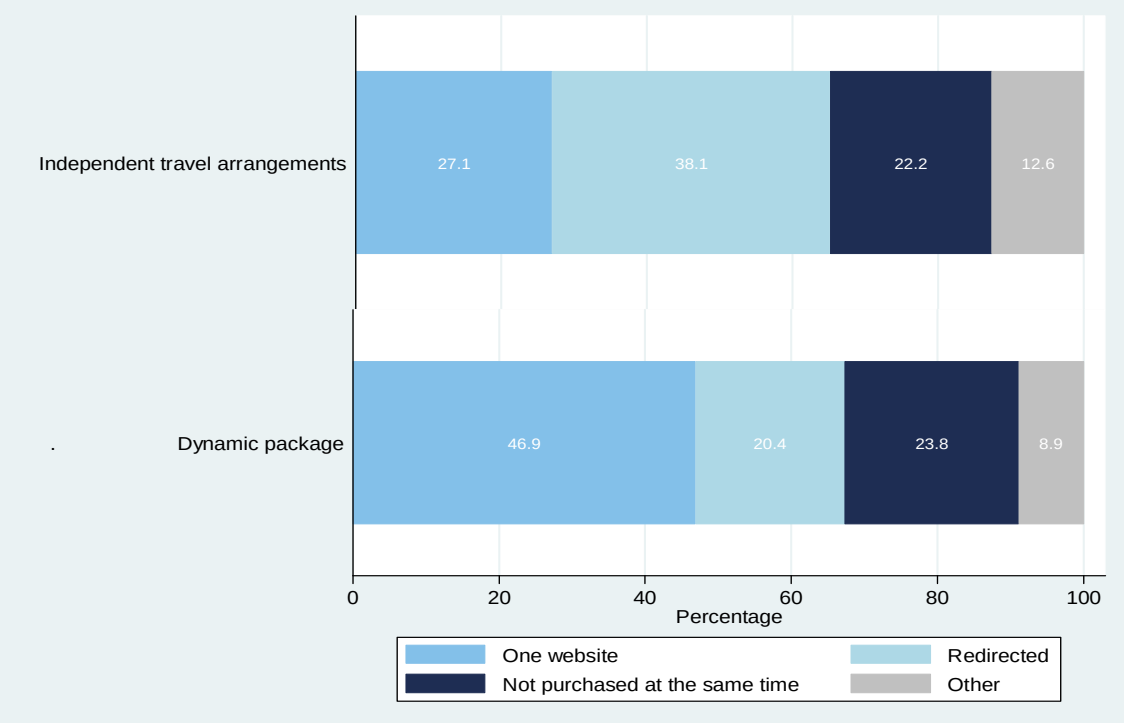
Source: London Economics based on data from Ipsos MORI.

Presentation of components

When considering the presentation of components on websites, it is clear that only 27% of the independent travel arrangements were made using only one website whereas the corresponding figure for dynamic packages is 47%. This is not surprising given the definition of dynamic packages and independent travel arrangements.

On the other hand it is remarkable that 24% of the dynamic packages and only 22% of independent travel arrangements were not purchased at the same time. This raises doubt as to whether some of the dynamic packages would more appropriately be classified as independent travel arrangements.

Figure 46: Presentation on websites of different travel elements by type of travel arrangement for EU17
(only applicable to respondents who used websites)



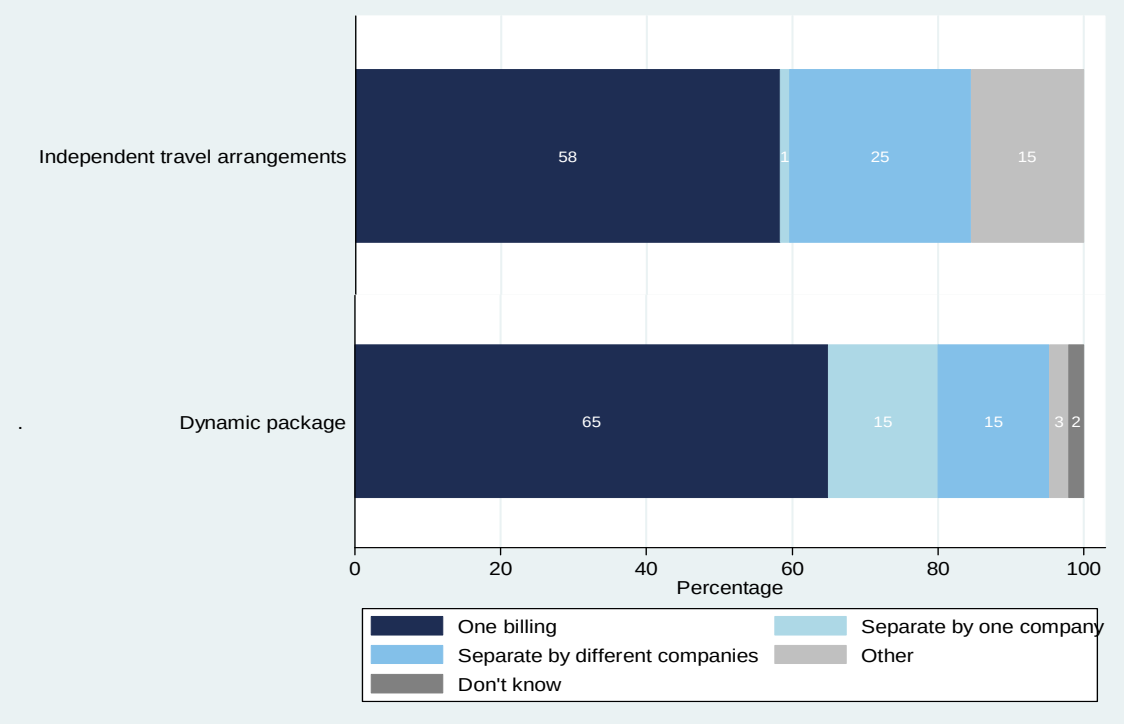
Note: This is based on Question 14 of the questionnaire. The number of respondents is given in Table 13 and Table 11. Observations are weighted such that they represent the age and gender structure of the population in each country. As a result the figures for EU-17 are effectively a weighted average of the country averages with population size used as weights
Source: London Economics based on data from Ipsos MORI.

Method of billing

There is a tendency that fewer respondents received one billing for independent travel arrangements (58%) than for dynamic packages (65%) (Figure 47). In addition, it seems that a large share (25%) of respondents who had problems with independent travel arrangements had received separate billings from different companies than was the case for respondents with problems related to dynamic packages (15%).

It should be emphasized that although the share of respondents who received one billing is lower for independent travel arrangements than for dynamic packages, there is a surprisingly large share of those who made independent travel arrangements for the same trip who received one billing. This again raises doubt about whether the respondents clearly understand the definitions of independent travel arrangements and dynamic packages respectively.

Figure 47: Method of billing by type of package for EU-17



Note: This is based on question 15 of the questionnaire. The number of respondents for each type of travel arrangements is given in Table 5 and Table 11. Observations are weighted such that they represent the age and gender structure of the population in each country. As a result the figures for EU-17 are effectively a weighted average of the country averages with population size used as weights

Source: London Economics based on data from Ipsos MORI.

5.5.3 Incidence of problems for different types of travel arrangements

Figure 48 shows that in all countries the incidence of problems[27] with dynamic packages was larger than the incidence of problems with the other types of travel

[27] The incidence of problems is defined as the number of respondents who had experienced problems with the given type of travel arrangements relative to the number of respondents who had used that type of travel

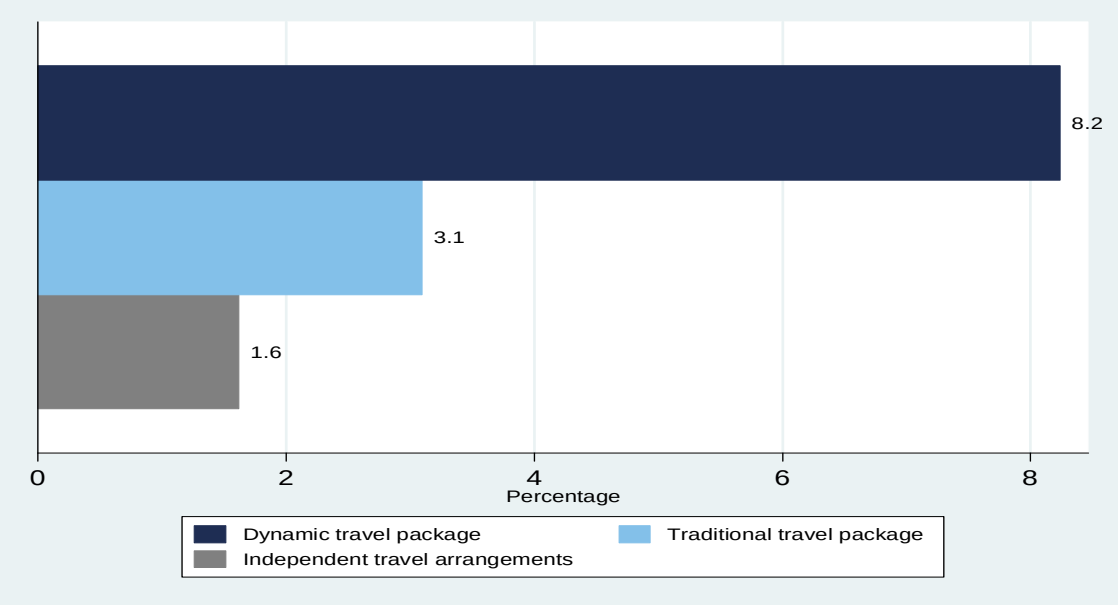
arrangements in all countries. The incidence of problems was on average 8.2% for dynamic packages, 3.1% for traditional packages and 1.6% for independent travel arrangements for the same holiday.

It should, however, be emphasised that it may not be appropriate to compare the calculated incidence of problems with dynamic packages with those calculated for the two other types of travel arrangements. The problem is that the questions related to other joint travel arrangements only were asked to respondents who had **not** experienced problems with dynamic packages. However, some people may have a lower threshold for when a problem occurs and therefore this group of individuals will be more likely to say that they have had a problem regardless of the type of travel arrangements used. Since the questions related to dynamic packages were asked before the questions related to other types of travel arrangements, the group of individuals who experience relatively many problems and therefore experienced problems with dynamic packages, would not have been asked about their experiences with traditional packages and independent travel arrangements. As a result we may underestimate the incidence of problems with traditional packages and independent travel arrangements.

In addition, we would tend to underestimate the incidence of problems with these types of travel arrangements, if the respondents who experienced problems with dynamic packages on average travelled more than those who experienced no problems with dynamic packages.

arrangements.

Figure 48: Incidence of problems by type of travel arrangements (number of trips with problems per 100 trips)



Note: This is based on questions 29 and 6 of the questionnaire. The number of respondents to these questions is given in **Table 11**. Question 29 was asked only to respondents who had not experienced any problems with the dynamic package but had experienced problems with other types of travel arrangements. All respondents were asked question 6. Observations are weighted such that they represent the age and gender structure of the population in each country. As a result the figures for EU-17 are effectively a weighted average of the country averages with population size used as weights.
Source: London Economics based on data from Ipsos MORI.

Table 5 shows the number of respondents with problems related to traditional packages and independent travel arrangements in each of the survey countries. As a reference point we have also included the number of respondents who had problems with dynamic packages.

Table 5: Number of respondents who had experienced problems within the last 2 years by type of travel arrangement			
Country	**Dynamic packages**	**Traditional packages**	**Independent travel arrangements**
Austria	22	6	1
Bulgaria	43	4	0
Czech Republic	27	3	1
Denmark	27	3	5
Finland	37	5	8
France	51	5	1
Germany	25	6	1
Greece	30	6	5
Hungary	22	2	0
Ireland	30	2	2
Italy	32	5	2
Netherlands	23	4	3
Poland	25	8	4
Slovenia	38	4	1
Spain	34	2	3
Sweden	28	4	4
UK	32	3	4
EU-17	**526**	**72**	**44**

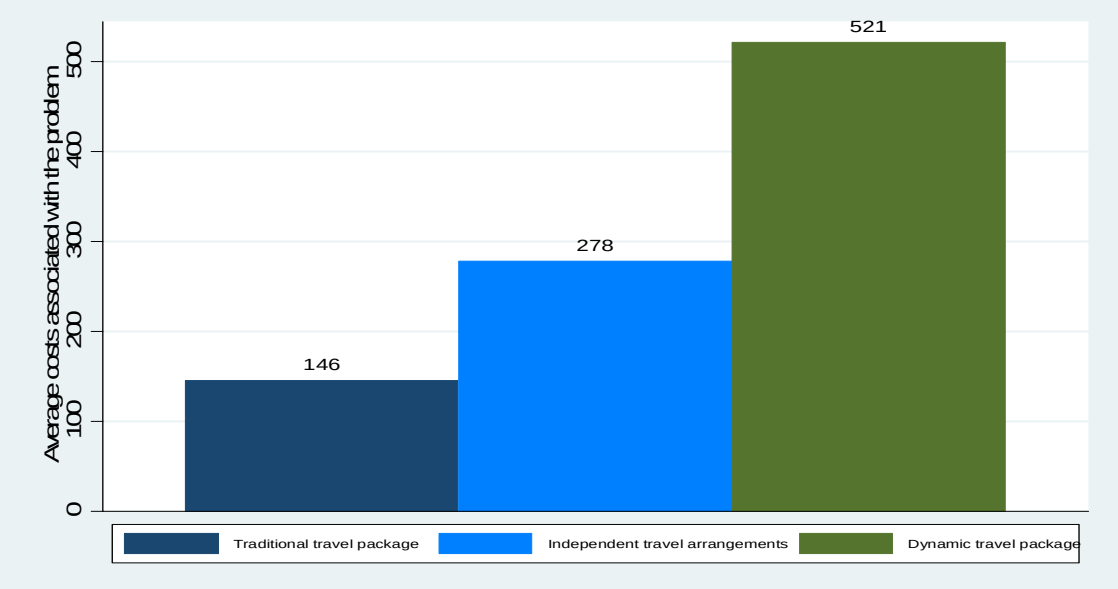
5.5.4 Magnitude of problems

Total costs associated with problems

The survey asked respondents who had experienced a problem with their holiday arrangements to estimate the costs inflicted on them as a result of the problem.

At the aggregate EU-17 level there seems to be a tendency that problems with dynamic packages involve more costs than those with traditional packages and independent travel arrangements. Problems with traditional packages imply the lowest costs for consumers (Figure 49).

Figure 49: Average total costs associated with the problem (in €) – weighted average for EU-17



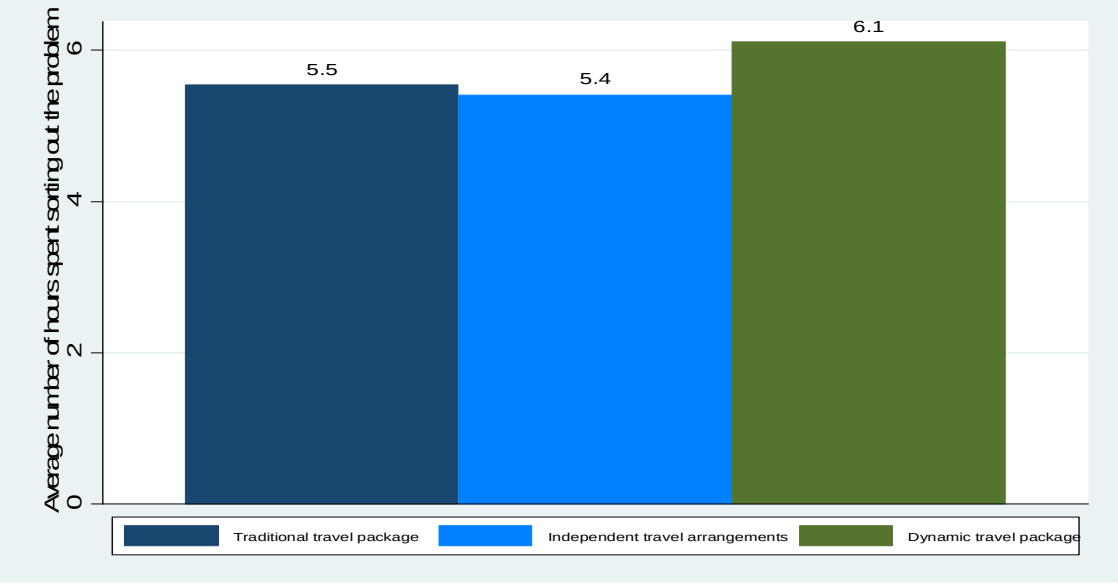
Note: This is based on question 19. The number of respondents for each type of travel arrangements is given in Table 5. One Greek outlier for independent travel arrangements has been excluded. Observations are weighted such that they represent the age and gender structure of the population in each country. As a result the figures for EU-17 are effectively a weighted average of the country averages with population size used as weights

Source: London Economics based on data from Ipsos MORI.

Time spent solving the problem

At the EU-17 level in the sample about 5.4-6.1 hours was spent on average complaining about problems with all types of travel arrangements. Most time was spent complaining about dynamic packages and least time was spent complaining about independent travel arrangements.

Figure 50: Time spent sorting out the problem (hours)



Note: This is based on question 20. The number of respondents is given in Table 5 but when calculating the average we have removed all responses of more than 48 hours. Observations are weighted such that they represent the age and gender structure of the population in each country. As a result the figures for EU-17 are effectively a weighted average of the country averages with population size used as weights

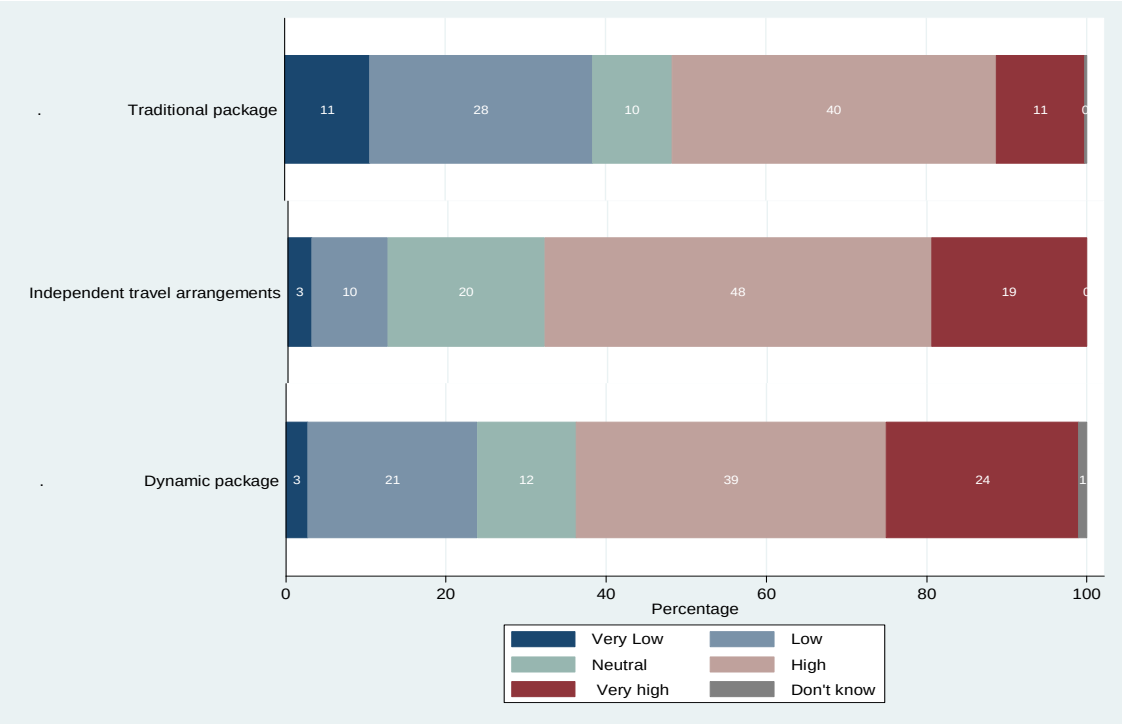
Source: London Economics based on data from Ipsos MORI.

Emotional effects

In relation to psychological detriment, 51% of problems with traditional packages resulted in high or very high emotional distress. For dynamic packages the corresponding figure was 63% and for independent travel arrangements it was 67% (Figure 51).

This all seem to suggest that problems related to independent travel arrangements involve more costs both financially and non-financially than problems related to dynamic packages. Problems with traditional packages on average involve fewer costs than problems with any other type of travel arrangements.

Figure 51: Degree of negative emotional effects when the problem occurred by type of travel arrangements for EU-17

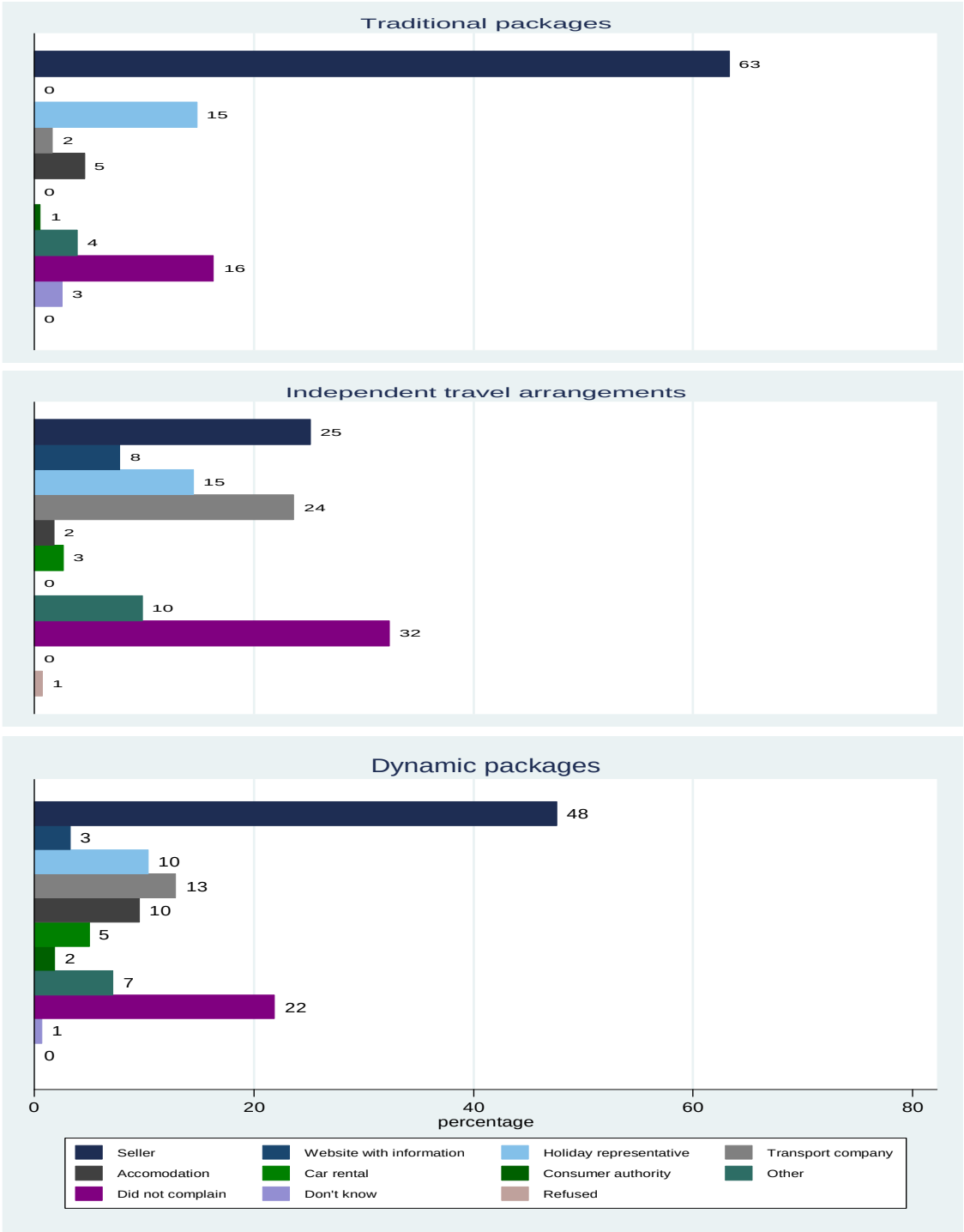


Note: This is based on Question 26 of the questionnaire. The number of respondents is given in Table 5 . Observations are weighted such that they represent the age and gender structure of the population in each country. As a result the figures for EU-17 are effectively a weighted average of the country averages with population size used as weights
Source: London Economics based on data from Ipsos MORI.

Compensation

The most remarkable difference between complaint behaviour related to dynamic packages and complaint behaviour related to traditional packages and independent travel arrangements is that people seem more likely to complain the more 'packaged' the holiday is. In particular, 16% did not complain over problems with traditional packages, 22% did not complain over problems with dynamic packages and 32% did not complain over problems with independent travel arrangements. For all types of travel arrangements, complaints are most frequently directed towards the seller. However, the less 'packed' the elements are the less likely the customer is to complain to the seller and the more likely the customer is to complain to someone else.

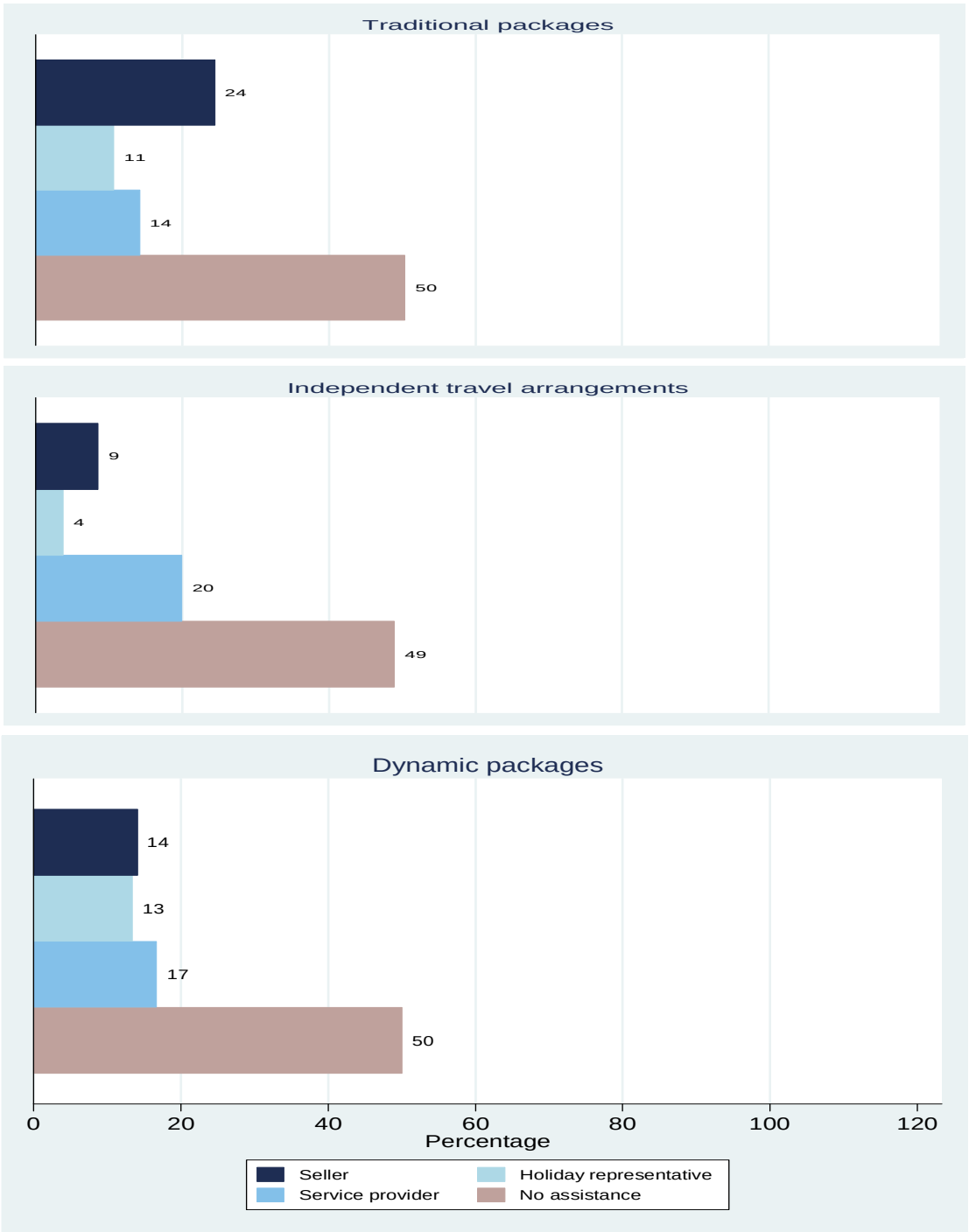
Figure 52: Who were complaints directed to?



Note: This is based on Question 18 of the questionnaire. The number of respondents is given in Table 5. Observations are weighted such that they represent the age and gender structure of the population in each country. As a result the figures for EU-17 are effectively a weighted average of the country averages with population size used as weights.
Source: London Economics based on data from Ipsos MORI.

Like for dynamic packages often no assistance was provided when problems occurred with traditional packages and independent travel arrangements (Figure 53). However, it does seem that customers are approximately equally likely to receive assistance regardless of the type of holiday arrangements they had made. In particular, for dynamic packages no assistance is provided in 50% of the cases, for traditional packages and independent travel arrangements no assistance is provided in 50% and 49% of the cases respectively. Further, it seems that sellers of traditional packages are more likely to provide assistance than sellers of dynamic packages and independent travel arrangements.

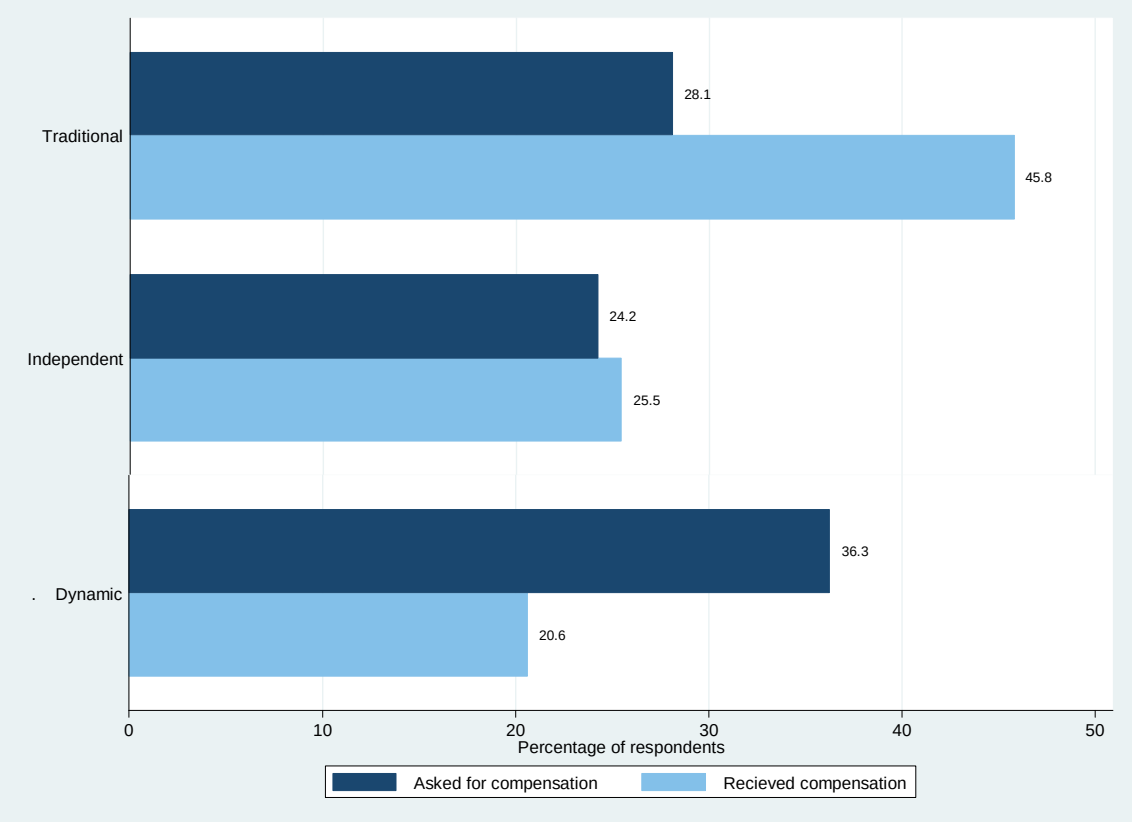
Figure 53: Did you receive assistance and from whom?



Note: This is based on Question 21 of the questionnaire. The number of respondents is given in Table 5. Observations are weighted such that they represent the age and gender structure of the population in each country. As a result the figures for EU-17 are effectively a weighted average of the country averages with population size used as weights.
Source: London Economics based on data from Ipsos MORI.

Generally a larger share of respondents seems to have asked for compensation when problems relate to dynamic packages than when they relate to traditional packages and independent travel arrangements (Figure 54). However, compensation was more frequently received for problems related to traditional packages or independent travel arrangements.

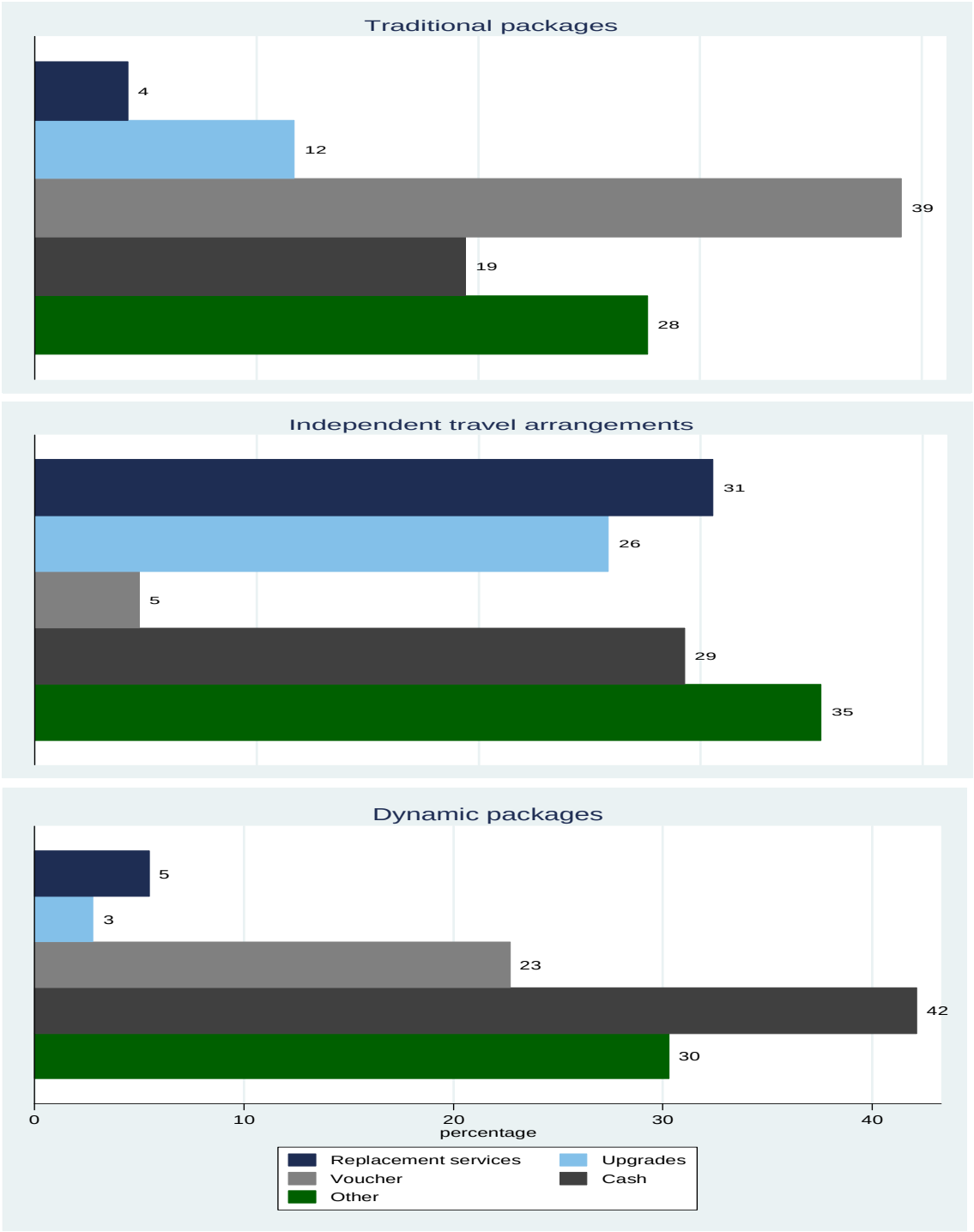
Figure 54: Percentage of respondents with problems who asked for and received some kind of compensation



Note: This is based on question 22 and 23. The number of respondents is given in Table 5. Observations are weighted such that they represent the age and gender structure of the population in each country. As a result the figures for EU-17 are effectively a weighted average of the country averages with population size used as weights.
Source: London Economics based on data from Ipsos MORI.

Those who received compensation typically received vouchers or cash for traditional packages and cash, upgrades or replacement services for independent travel arrangements (Figure 55). Cash was most commonly used for dynamic packages; replacement services were most commonly used for independent travel arrangements; and vouchers were most commonly used for traditional packages.

Figure 55: Type of compensation received



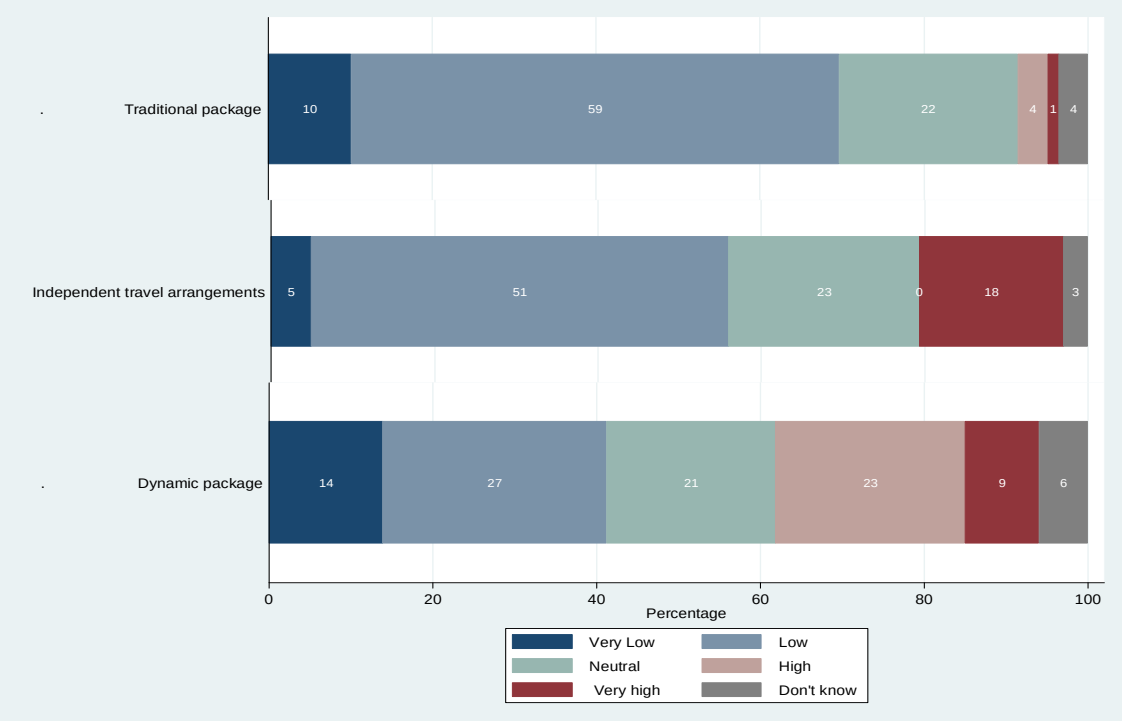
Note: This is based on Question 24 of the questionnaire. The number of respondents is given in **Table 13** and Table 12. Observations are weighted such that they represent the age and gender structure of the population in each country. As a result the figures for EU-17 are effectively a weighted average of the country averages with population size used as weights.

Source: London Economics based on data from Ipsos MORI.

Due to the low level of respondents who received compensation either as cash or vouchers, the average compensation received is in most cases €0. Therefore we are unable to make robust estimates of the level of compensation offered to customers for independent travel arrangements and traditional packages.

Figure 56 shows the degree of negative emotion associated with the problem after assistance and/or compensation had been provided. For all types of travel arrangements it holds that assistance and/or compensation if provided reduces the degree of negative emotion (compare with Figure 51). It seems that assistance and/or compensation is more effective at reducing the degree of negative emotion associated with the problem for traditional packages (high or very high negative emotion reduced from 51% to 5%) and independent travel arrangements (high or very high negative emotion reduced from 67% to 18%) than for dynamic packages (high or very high negative emotion reduced from 63% to 32%).

Figure 56: Degree of negative emotional effects when the problem had been dealt with by type of travel arrangements for EU-17



Note: This is based on Question 27 of the questionnaire. The question applies only to individuals who had received assistance and/or compensation. The number of respondents is given in **Table 13** and **Table 12**.
Source: London Economics based on data from Ipsos MORI.

5.6 Estimation of personal detriment for dynamic packages

Based on responses to the consumer survey a calculation of annual consumer detriment in the dynamic package market can be carried out for each of the survey country and for EU-17. In this section we describe the methodology applied and present the results.

The methodology used to calculate the annual personal detriment can be split into 2 steps which will be described in detail below:

- calculating personal detriment in the sample in the last 2 years; and
- calculating annual personal detriment in the population.

These steps are described in the first two sections of this chapter and the results are discussed in the last section.

5.6.1 Step 1: Personal detriment in the sample

Personal detriment in the sample is calculated using survey results. The survey asked respondents a number of specific questions related to the personal detriment associated with the problems they had experienced. The questions were related to:

- the number of problems with dynamic packages experienced within the last 2 years or so;
- the costs associated with the problem; and
- the time spent resolving the problem.

These questions are the key inputs in our calculation of consumer detriment. First we calculate gross personal consumer detriment in the sample as:

Box 1: Gross personal detriment in sample

Gross personal detriment in sample=

Gross personal detriment per problem x Total number of problems in sample

where

Gross personal detriment per problem =

Average cost of problem + average time spent complaining x value of time

Total number of problems in sample =

Number of respondents in sample with problems x

Average number of problems experienced by individuals with problems

The gross personal detriment calculation thus includes the costs associated with repair, replacement, solving the problem as well as the cost of the time spent complaining. In addition, it takes into account that each individual in the sample who have experienced a problem may have experienced more than one problem.

Having estimated gross personal consumer detriment we can estimate net personal detriment as:

Box 2: Net personal detriment in sample

Net personal detriment in sample =

Gross personal detriment in sample – Compensation in sample

where

Compensation in sample = Total number of problems in sample x

Share of respondents with problems who received compensation x

Average value of compensation received

Net personal detriment is the gross personal detriment in the sample less the total value of compensation received by respondents in the sample. This is a measure of the level of consumer detriment in the sample once the problems have been dealt with.

Before presenting our estimates of gross and net personal detriment, some comments about how the variables in Box 1 and 2 are measured are appropriate.

We estimate the average cost of the problem, the average time spent complaining and the average value of compensation using the survey results. However, this gives rise to the question of whether we should correct for potential outliers. Ideally we would prefer to do this but it involves some difficulty.

Firstly, it is difficult to assess which outliers to exclude. Some outliers may exist because the respondent misunderstood the question or overestimated the time or value. Other outliers may represent genuine problems which took a long time to resolve and which were very costly. If we exclude the former, we clearly improve our estimate of the value of personal detriment but it is less clear that we improve our estimate if we exclude the latter observations. In fact we may then underestimate personal detriment in the market.

Secondly, we need to be consistent. In particular if we exclude outliers in our estimates of the costs, we should also exclude outliers in our estimates of the value of compensation received.

Thirdly, when deciding whether to include outliers we need to also consider the number of observations available. Excluding outliers and extreme values from the calculation of the average value of compensation received may leave us with very few if any observations. Further the low number of observations makes it even more difficult to determine which observations are outliers and which are not.

Given these considerations, we propose a mixed strategy. When calculating the average time spent complaining we exclude observations of 48 hours or more. The argument is that these observations seem to be clear outliers in the box plot in **Figure 25** and it seems reasonable to assume that these individuals have misunderstood the question and reported the duration of the problem instead of the time spent sorting out the problem.

In relation to the average value of compensation there are so few observations that we cannot afford to exclude any and to be consistent we do not exclude outliers from the calculation of the average costs associated with the problem either.

In order to assess the value of the time spent complaining, we need to put a value on the time wasted by consumers. To guide us, we resorted to the economics literature in two particular areas: the value of travelling time in transport models and the value of leisure time in demand for entertainment.

If the time wasted could be considered time that would otherwise have been spent at work, we could approximate the hourly value of that time by the average hourly wage rate for each country. However, since we are considering the market for dynamic packages most travellers are likely to be leisure travellers and the time wasted is likely to be leisure time Therefore, we need to estimate the value of leisure time.

Because no explicit market exists for time spent at leisure, no market price for that time can be observed and the value of time, therefore, must be inferred. In principle, willingness to pay for savings of leisure time should be lower than willingness to pay for savings of work time, because the wage rate includes payment both for the effort and the scarce skills embodied in the work activity.

The literature has estimated the value of leisure time by asking survey respondents how much they would be willing to pay to save a certain amount of time on a trip to a leisure destination. Clearly, the willingness to pay for leisure time may vary by journey and timing, both because time may be valued differently at different times of the day, and because the travel activity may have some positive utility. Research, however, has shown that there are no significant differences in the value of non-working time saved associated with differences in journey purpose. In the absence of evidence to the contrary, a good rule of thumb recommended in a World Bank publication is to value all leisure time saved equally at about one third of the traveller's hourly wage.

Apart from this publication, many other authors have suggested using a similar fraction of hourly wage to value time. Amoako-Tuffour and Martınez-Espineira (2008) recognise that a common convention is to use 1/3 of the wage as the value of time (as do Hellerstein, 1993; Englin and Cameron, 1996; Bin et al., 2005). Cesario (1976) used 0.43 as the fraction of the wage rate corresponding to the cost of time, Liston-Heyes and Heyes (1999) and Hagerty and Moeltner (2005) used 1/3 of the wage. Sohngen et al. (2000) and Sarker and Surry (1998) used 0.3.

In conclusion, we have therefore chose to use 1/3 of the average hourly wage rate in each country to value time wasted dealing with problems facing consumers.

Unfortunately, we have no comparative data on the average hourly wage rate for all 17 survey countries. Instead we use an estimate of 13.9£/hour of the average hourly earnings in the UK as a starting point and use 2008 GDP per capita figures from Eurostat to adjust this figure to the remaining countries. We refer to Annex 8 for details.

As for the remaining variables in Box 1 and 2, the number of respondents with problems and the share of respondents with problems who received compensation are straight forward to calculate using the survey results. Nevertheless, to calculate the average number of problems experienced we need to assume that respondents who said that they had experienced 5 or more problems had experienced exactly 5 problems.

Given these assumptions we estimate the gross and net levels of personal detriment in the sample in Table 6 and Table 7 respectively. The EU-17 estimate is calculated as the sum of the country estimates.

Table 6: Gross personal detriment in sample						
Column 1	**Column 2**	**Column 3**	**Column 4**	**Column 5**	**Column 6**	**Column 7** **= [column 2 + column 3 x column 4] x column 5 x column 6**
Country	**Average costs (€)**	**Average time wasted (hours)**	**Value of time (€ per hour)**	**Number of respondents with problems**	**Average number of problems for respondents with problems**	**Personal detriment in sample (€)**
		Value of time spent complaining		**Total number of problems in sample**		
Austria	935	7.10	5.97	22	1.96	42,044
Bulgaria	8	10.03	0.80	43	1.34	923
Czech	300	3.39	2.51	27	1.21	10,115
Denmark	240	2.85	7.51	27	1.11	7,802
Finland	346	4.65	6.19	37	1.33	18,424
France	663	4.99	5.37	51	1.45	51,091
Germany	1,288	6.19	5.36	25	1.44	47,496
Greece	464	4.27	3.82	60	1.29	37,147
Hungary	65	4.56	1.86	22	1.07	1,711
Ireland	947	4.30	7.39	30	1.87	54,940
Italy	239	9.55	4.65	32	1.25	11,283
Netherlands	580	3.71	6.40	23	1.13	15,672
Poland	196	3.99	1.68	25	1.39	7,031
Slovenia	51	3.59	3.22	38	1.17	2,801
Spain	539	4.72	4.24	34	1.04	19,805
Sweden	203	5.02	6.29	28	1.45	9,503
UK	310	7.59	5.25	62	1.23	26,636
EU-17						**364,422**

Note: EU-17 is calculated as the sum of the country estimates.
Source: London Economics based on survey data from Ipsos Mori, Eurostat and the 2008 Annual Survey of Hours and Earnings, UK Office for National Statistics.

Table 7: Net personal detriment in sample						
Column 1	**Column 2**	**Column 3**	**Column 4**	**Column 5**	**Column 6**	**Column 7** **= column 2 - column 3 x column 4 x column 5 x column 6**
Country	**Gross personal detriment in sample**	**Percentage of respondents with problems who received compensation**	**Average value of compensation when given (€)**	**Number of respondents with problems**	**Average number of problems for respondents with problems**	**Personal detriment in sample (€)**
		Average value of compensation received		**Total number of problems in sample**		
Austria	977	2.38	100	22	1.96	42,030
Bulgaria	16	2.28	77	43	1.34	819
Czech	308	26.10	70	27	1.21	9,474
Denmark	261	13.23	907	27	1.11	4,229
Finland	374	14.07	290	37	1.33	16,417
France	690	7.47	188	51	1.45	49,978
Germany	1,321	5.20	20	25	1.44	47,534
Greece	481	4.77	800	60	1.29	34,242
Hungary	73	6.23	252	22	1.07	1,349
Ireland	978	3.10	400	30	1.87	54,188
Italy	283	6.63	1,038	32	1.25	8,573
Netherlands	604	26.97	344	23	1.13	13,282
Poland	203	11.14	133	25	1.39	6,535
Slovenia	63	17.84	374	38	1.17	-169
Spain	559	25.07	224	34	1.04	17,771
Sweden	235	25.06	135	28	1.45	8,163
UK	350	12.55	362	62	1.23	23,224
EU-17						**337,637**

Note: EU-17 is calculated as the sume of the country estimates.

Source: London Economics based on survey data from Ipsos Mori, Eurostat and the 2008 Annual Survey of Hours and Earnings, UK Office for National Statistics.

The level of accuracy for these calculations is as provided in Table 1 of Section 6.

5.6.2 Step 2: Annual personal detriment in the population

The next step is now to derive an estimate of annual personal detriment from package travel in each of the 17 countries and in EU-17 based on the estimates of personal detriment in the sample. The figures calculated in step 1 are simply scaled up to reflect that only part of the population was surveyed.

Two things need to be taken into consideration when we do this. Firstly, each household was surveyed only once. This implies that we should scale the figures up by the total number of households and not by the size of the population.

Secondly, interviewees aged 15 or below were excluded from participation in the survey. Therefore the number of households surveyed should not be estimated by the total number of interviewees[28] who agreed to participate. Instead it is estimated by the number of interviewees who agreed to participate and were at least 16 years old. For further details we refer to the detailed description of the survey process provided in Annex 5.

Given these considerations we apply the following methodology to estimate annual personal detriment in the population caused by dynamic packages:

Box 3: Annual personal detriment in population

***Annual personal detriment in population* =**

Personal detriment in sample / share of households surveyed / 2 years

where

Share of households surveyed =

Number of participating interviewees above 15 years /

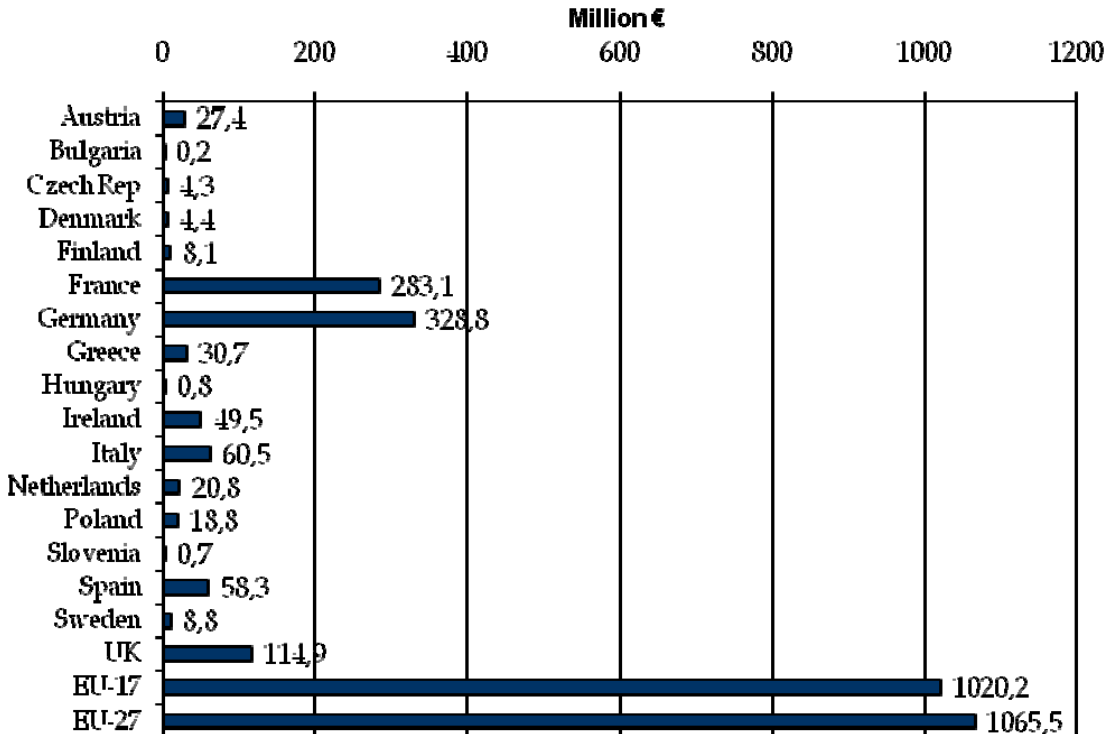
(Population / average household size)

We do this for both our gross and our net estimates of personal detriment in the sample.

[28] Interviewees include both those who completed the survey and those who did not because they did not have any experiences with dynamic packages within the last 2 years.

Our estimates of gross personal consumer detriment are provided in Table 8 and Figure 57. In EU-17 we estimate gross personal detriment from dynamic packages at €1.020 billion per year and in EU-27 we estimate it at €1.066 billion per year. This implies that the majority of the detriment is estimated to arise in the 17 survey countries. The reason is that the 10 non-survey countries are relatively small countries and many of them are relatively low income countries. In fact the GDP of the 10 non-survey countries amounts to only 7% of the GDP of the 17 survey countries. Clearly the majority of the detriment arises in the large countries: the UK, Germany and France.

Figure 57: Estimated gross personal detriment



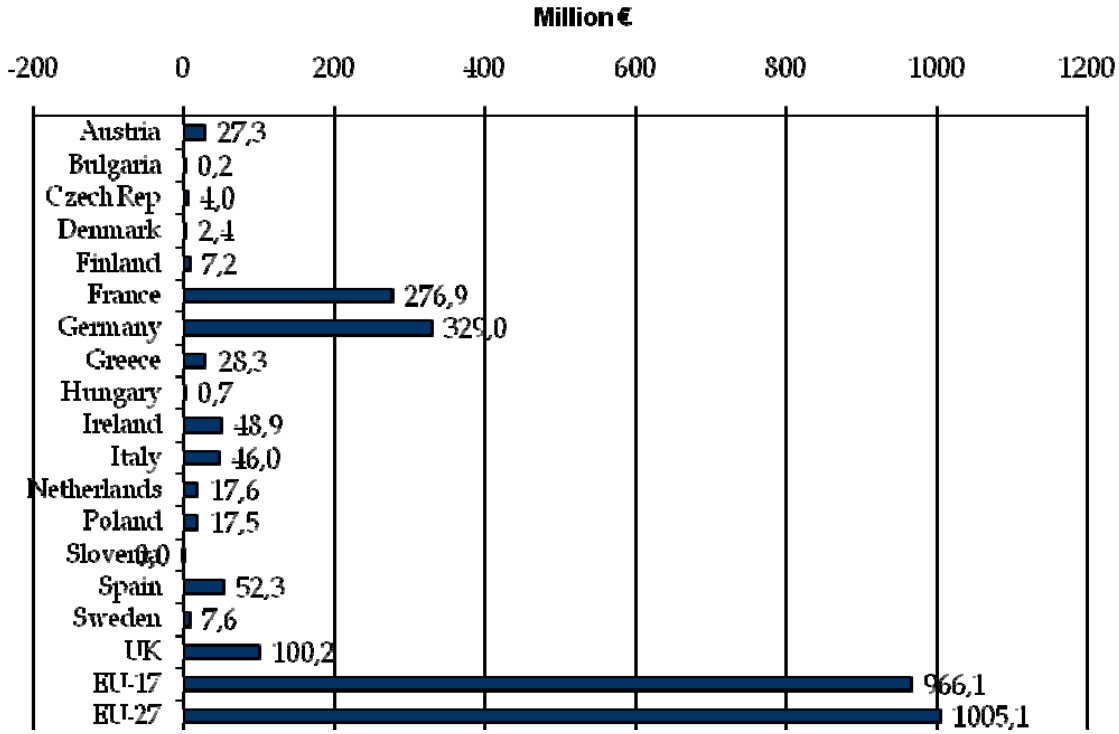
Note: The figure for EU-27 is extrapolated using the methodology described in Annex 9.
Source: London Economics based on survey data from Ipsos MORI, data from Eurostat and the 2008 Annual Survey of Hours and Earnings, UK Office for National Statistics.

Table 8: Annual gross personal detriment in the population					
Column 1	**Column 2**	**Column 3**	**Column 4** **=column 2 / column 3 / 2 years**	**Column 5**	**Column 6** **= column 4 / (column 5 x population)**
Country	**Gross personal detriment in sample (€)**	**Share of households surveyed**	**Value of detriment in population (€)**	**Share of population having used dynamic packages within the last 2 years**	**Value of detriment per person having used dynamic packages within the last 2 years (€)**
Austria	42,044	0.00077	27,353,915	25%	13.2
Bulgaria	923	0.00238	193,666	8%	0.3
Czech Republic	10,115	0.00118	4,279,890	12%	3.3
Denmark	7,802	0.00090	4,357,929	26%	3.0
Finland	18,424	0.00114	8,070,832	20%	7.5
France	51,091	0.00009	283,086,157	22%	19.8
Germany	47,496	0.00007	328,776,076	24%	16.6
Greece	37,147	0.00060	30,738,522	20%	13.5
Hungary	1,711	0.00104	825,158	19%	0.4
Ireland	54,940	0.00055	49,544,572	46%	24.6
Italy	11,283	0.00009	60,543,281	36%	2.8
Netherlands	15,672	0.00038	20,784,513	26%	4.9
Poland	7,031	0.00019	18,807,093	19%	2.5
Slovenia	2,801	0.00193	727,425	42%	0.9
Spain	19,805	0.00017	58,334,741	19%	7.0
Sweden	9,503	0.00054	8,818,987	44%	2.2
UK	26,636	0.00012	114,909,264	20%	9.3
EU-17			**1,020,152,022**	**24%**	**9.7**
EU-27			1,065,473,124	**23%**	**9.3**

Note: The EU-17 estimate of the value of annual detriment is the sum of the country estimates and the per capita EU-17 figure is calculated as the value of detriment in the population divided by the total size of the population in the 17 survey countries. EU-27 is extrapolated from the EU-17 estimate using GDP.
Source: London Economics based on survey data from Ipsos MORI, data from Eurostat and the 2008 Annual Survey of Hours and Earnings, UK Office for National Statistics.

Our estimates of net personal consumer detriment are provided in Table 9 and Figure 58. Our estimates suggest that net personal detriment from dynamic packages in EU-17 is €0.966 billion per year and in EU-27 it is €1.005 billion per year.

Figure 58: Estimated net personal detriment



Note: The figure for EU-27 is extrapolated using the methodology described in Annex 9.
Source: London Economics based on survey data from Ipsos MORI, data from Eurostat and the 2008 Annual Survey of Hours and Earnings, UK Office for National Statistics.

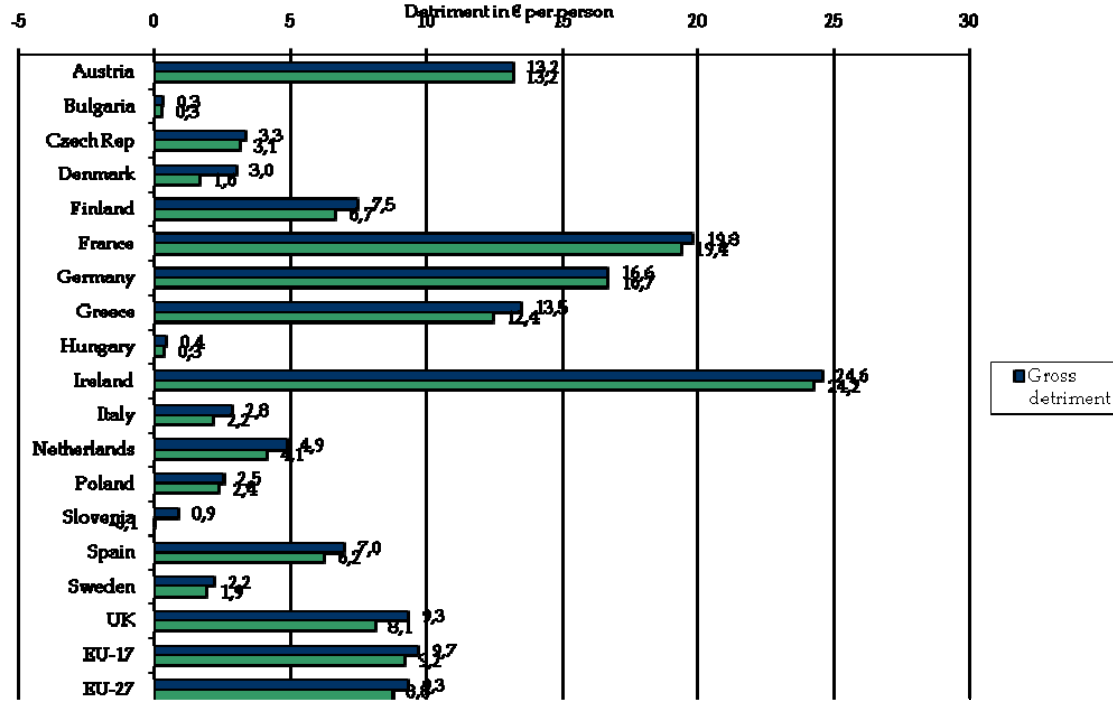
Table 9: Annual net personal detriment in the population					
Column 1	**Column 2**	**Column 3**	**Column 4** **=column 2 / column 3 / 2 years**	**Column 5**	**Column 6** **= column 4 / (column 5 x population)**
Country	**Gross personal detriment in sample (€)**	**Share of households surveyed**	**Value of detriment in population (€)**	**Share of population having used dynamic packages within the last 2 years**	**Value of detriment per person having used dynamic packages within the last 2 years (€)**
Austria	42,030	0.000769	27,344,966	25%	13.2
Bulgaria	819	0.002383	171,818	8%	0.3
Czech Republic	9,474	0.001182	4,008,703	12%	3.1
Denmark	4,229	0.000895	2,362,013	26%	1.6
Finland	16,417	0.001141	7,191,400	20%	6.7
France	49,978	0.000090	276,923,587	22%	19.4
Germany	47,534	0.000072	329,035,660	24%	16.7
Greece	34,242	0.000604	28,334,467	20%	12.4
Hungary	1,349	0.001037	650,587	19%	0.3
Ireland	54,188	0.000554	48,866,701	46%	24.2
Italy	8,573	0.000093	46,001,507	36%	2.2
Netherlands	13,282	0.000377	17,614,353	26%	4.1
Poland	6,535	0.000187	17,480,651	19%	2.4
Slovenia	-169	0.001925	-43,820	42%	-0.1
Spain	17,771	0.000170	52,344,924	19%	6.2
Sweden	8,163	0.000539	7,575,327	44%	1.9
UK	23,224	0.000116	100,188,853	20%	8.1
EU-17			**966,051,697**	**24%**	**9.2**
EU-27			1,005,057,032	**23%**	**8.8**

Note: The EU-17 estimate of the value of annual detriment is the sum of the country estimates and the per capita EU-17 figure is calculated as the value of detriment in the population divided by the total size of the population in the 17 survey countries. EU-27 is extrapolated from the EU-17 estimate using GDP.
Source: London Economics based on survey data from Ipsos MORI, data from Eurostat and the 2008 Annual Survey of Hours and Earnings, UK Office for National Statistics.

For a comparison of detriment across countries it is more appropriate to consider gross and net detriment per person who has used dynamic packages within the last 2 years. Figure 59 shows that net and gross personal detriment in Ireland is relatively

high. This might be related to the fact that we found in the survey that Irish consumers are very likely to purchase dynamic packages using websites and packages purchased from websites seem to be relative likely to cause problems. Personal detriment is on the other hand relatively low in Denmark, Sweden, Italy and the new Member States in the sample. In Slovenia consumers who experience problems with dynamic packages on average seem to be adequately compensated for the costs associated with the problem. For EU-17 gross personal detriment per person who has used dynamic packages within the last 2 years is estimated at €9.7. Net personal detriment per person who has used dynamic packages within the last 2 years for EU-17 is estimated at €9.2. For EU-27 the estimates are €9.3 and €8.8, respectively. That is we estimate that detriment per person is lower in EU as a whole than in the 17 survey countries. This is because many of the countries not included in the survey are relatively low income countries and there seems to be a tendency that detriment is lower in low income countries. We refer to Annex 9 for further analysis of this.

Figure 59: Estimated personal detriment per person who has used dynamic packages within the last 2 years



Note: The figure for EU-27 is extrapolated using the methodology described in **Annex 9**.
Source: London Economics based on survey data from Ipsos MORI, data from Eurostat and the 2008 Annual Survey of Hours and Earnings, UK Office for National Statistics.

Alternatively, a cross country comparison of our estimates of net and gross detriment could be based on a comparison of net and gross detriment per problem (Figure 60). Our estimates suggest that on average in EU-17 net and gross personal detriment per problem is €560 and €593, respectively. Detriment per problem is very high in Germany, Ireland and Austria and very low in Bulgaria, Hungary and Slovenia.

The Bulgarian figure reflects that most Bulgarian respondents recorded no costs. It is a general finding in the survey that Bulgarians are relatively reluctant to record costs or income levels (see for instance Figure 77). In addition, cost and income levels are generally lower in Bulgaria than in the other survey countries. This latter point is supported by the fact that detriment per problem is also low in Hungary and Slovenia; countries which also have below average income levels.

On the other hand, the high German figure[29] might be related to the existence of the so-called "Frankfurt Table" which gives guidelines for percentage reductions in the price of a holiday that people are entitled to for a number of problems. The existence of such a table might imply that German consumers feel more assured than other European consumers that they will get a price discount because they have experienced a problem and therefore they may choose to spend more money on replacement services than people from other countries who are uncertain whether they will get a reduction in the original price because a problem arose. It may, however, be that because dynamic packages offer less protection consumers do not receive the compensation they expected.

Furthermore, a recent study by EC DG Enterprise and Industry on completion in the EU tourism industry, suggests that German tourists are willing to pay relatively much for their holidays and at the same time have relatively high expectations to the comfort level on their holiday.[30] This may also imply that German tourists are more easily disappointed and are more willing to pay to put things right. Similar cultural factors may be in place in Austria and this may explain the high detriment per problem in Austria.

In the case of Ireland the high level of detriment per problem may arise because website purchases are overrepresented among purchases of dynamic packages. OK

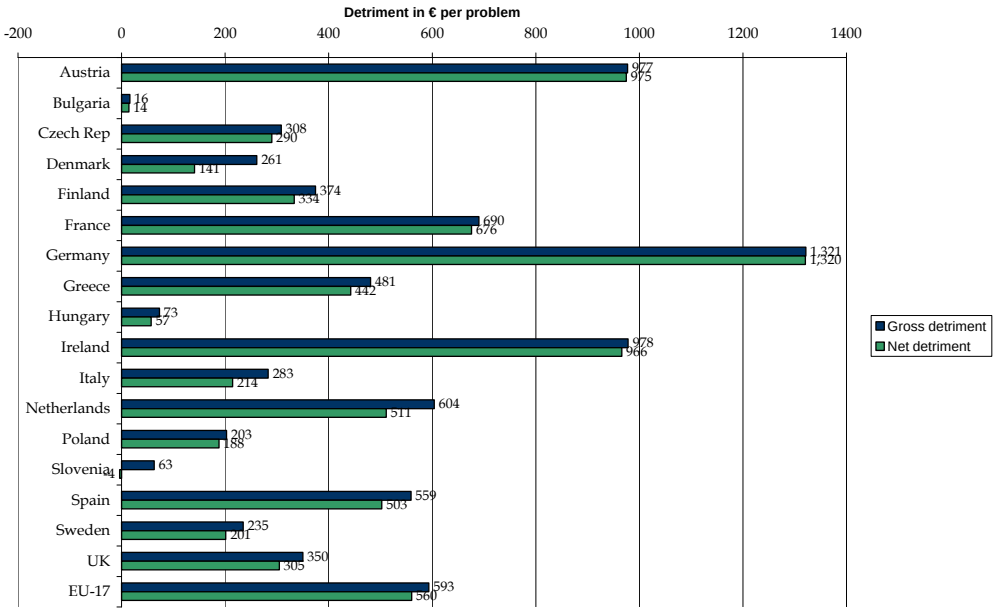
[29] We emphasize that the German figure does not appear to be driven by outliers or by extremely high costs reported for one particular cost item. Rather it seems that the German simple average for each cost item is similar to or above the averages of the other countries. In other words, the high German average total costs is due to relatively large costs experienced by many respondents for several cost items (travel replacement cost; day trip replacement costs; other replacement costs for inclusive items; car rental replacement costs; other replacement costs; follow up travel and accommodation costs).

[30] EC DG Enterprise and Industry (2009).

Furthermore, it is worth noting that the large difference between gross and net detriment in Denmark and the Netherlands may be due to the fact that additional provisions for consumer protection exist in these countries.

For the UK, we estimate gross and net personal detriment per problem at €350 and €305, respectively. In comparison the OFT did a study of consumer detriment in 2008 and estimated that for holiday travel gross personal detriment per problem amounted to €222. Our estimate is somewhat higher. This is partly because our estimate includes the cost of time spent sorting out the problem. We estimate this at approximately €40. However, the OFT cost figure is an average across all types of travel arrangements. Our survey results therefore suggest that the average costs of problems incurred are larger for dynamic packages than for other types of travel arrangements.

Figure 60: Estimated personal detriment per problem



Note: EU-17 is calculated as a weighted average of the 17 country estimates.
Source: London Economics based on survey data from Ipsos MORI, data from Eurostat and the 2008 Annual Survey of Hours and Earnings, UK Office for National Statistics.

It should be emphasised that the estimates of personal consumer detriment provided in this section do not include psychological detriment. However, as survey responses indicated psychological detriment was in many cases high or very high (see Figure 26). Psychological detriment is very hard to quantify because it may vary between countries and within countries and we are not aware of any studies which attempt to quantify it.

5.6.3 Detriment for different types of dynamic packages

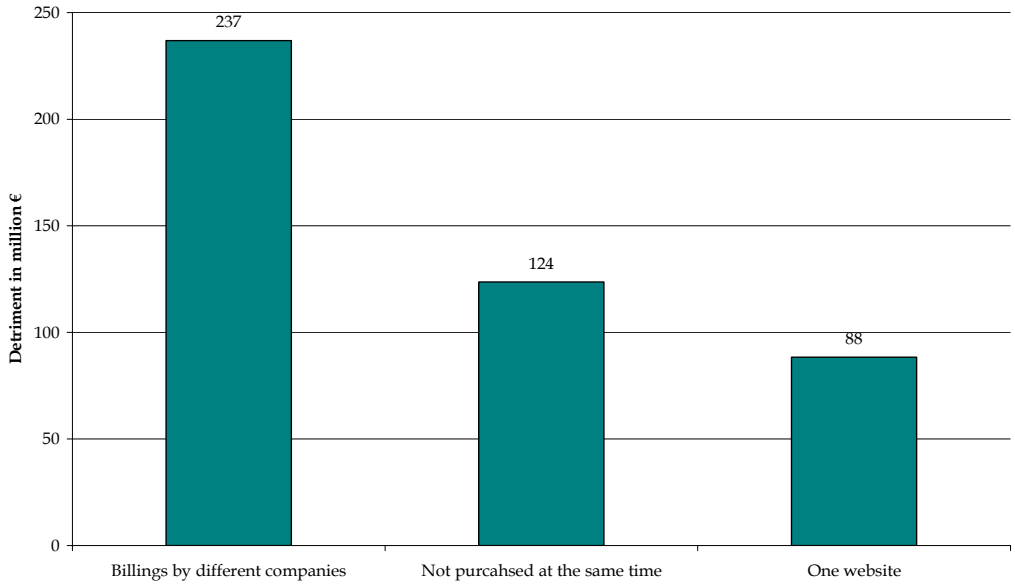
Different types of packages may be associated with different levels of consumer detriment because the level of protection varies. We, therefore, consider the level of gross[31] detriment associated with the following types of packages:

- packages with separate billings by different companies (60 cases in the EU-17 survey data);
- packages where all components were not purchased at the same time (51 cases); and
- packages purchased from only one website (99 cases).

Higher levels of total annual detriment are associated with the two former types of dynamic packages (Figure 61). These types of packages appear to fall outside the scope of the current Directive. In comparison, packages purchased from only one website appear to be included in the current Directive and less detriment is associated with this type of packages.

[31] We only consider gross detriment because the low number of observations makes estimates of the level of compensation very sensitive to outliers.

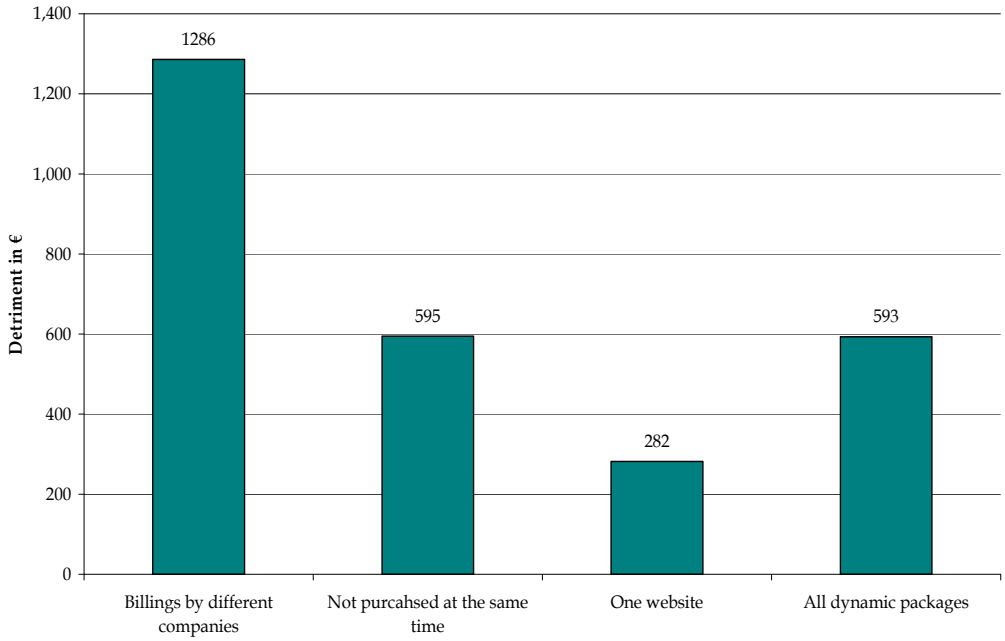
Figure 61: Gross annual detriment by type of dynamic package for EU-17



Note: EU-17 is calculated as a weighted average of the 17 country estimates. Estimates for packages with several billings by different companies rely on 60 observations, estimates for packages not purchased at the same time are based on 51 observations, and estimates of packages bought from only one website are based on 99 observations.
Source: London Economics based on survey data from Ipsos MORI, data from Eurostat and the 2008 Annual Survey of Hours and Earnings, UK Office for National Statistics.

This holds despite the fact that there are more cases of problems with packages purchased from one website than cases of the two other types of packages. This could indicate that problems with packages outside the scope of the directive are more costly to consumers than problems with packages currently that appear to be inside the scope of the Directive. Figure 62 confirms this and suggests that the cost per problem for packages with separate billings by different companies on average result is much higher than for the other types of packages considered. On the contrary packages purchased using only one website involves lower costs per problem than the other two types of packages. We emphasise that the detriment levels considered are gross detriment i.e. before potential compensation has been taken into account. We would expect that the differences in consumer protection for the packages considered would imply that these conclusions are further accentuated if we were to consider net detriment.

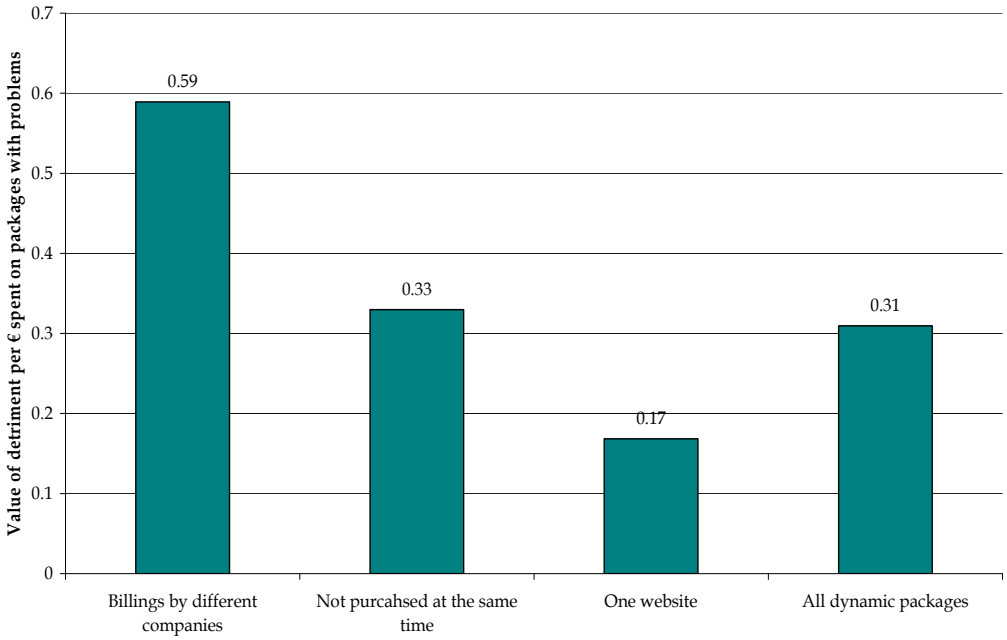
Figure 62: Gross detriment per problem by type of dynamic package for EU-17



Note: EU-17 is calculated as a weighted average of the 17 country estimates. Estimates for packages with several billings by different companies rely on 60 observations, estimates for packages not purchased at the same time are based on 51 observations, and estimates of packages bought from only one website are based on 99 observations.
Source: London Economics based on survey data from Ipsos MORI, data from Eurostat and the 2008 Annual Survey of Hours and Earnings, UK Office for National Statistics.

This is a significant difference and it could raise the question of whether the difference may be explained by 'one website' packages being of generally smaller value than the other two types. We verify that this is not the case in the graph below where we depict value of detriment on a per € spent basis.

Figure 63: Value of detriment per € spent on packages with problems, EU-17



Note: EU-17 is calculated as a weighted average of the 17 country estimates. Estimates for packages with several billings by different companies rely on 60 observations, estimates for packages not purchased at the same time are based on 51 observations, and estimates of packages bought from only one website are based on 99 observations.
Source: London Economics based on survey data from Ipsos MORI, data from Eurostat and the 2008 Annual Survey of Hours and Earnings, UK Office for National Statistics.

This result appears as a strong indication that there is an expectation of higher consumer detriment in 'more complex' packages which appear more clearly to fall outside the scope of the Directive.

5.6.4 Detriment for different types of travel arrangements

Personal detriment from dynamic packages may also be compared with personal detriment from other types of travel arrangements. In particular, we compare with consumer detriment for traditional travel packages and independent travel arrangements.

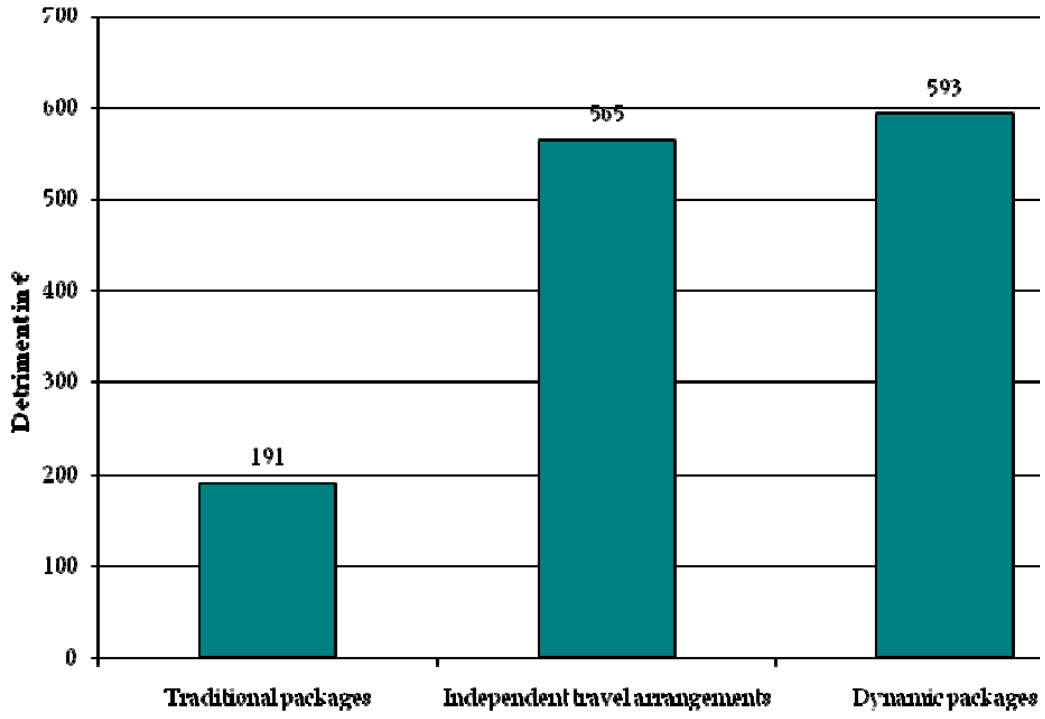
We use the same methodology as described above for dynamic packages and survey results to calculate gross personal detriment for traditional travel packages and for independent travel arrangements[32].

[32] We focus on gross detriment because net detriment calculations rely on estimates of the level of compensation. Due to the low number of observations for traditional and independent travel arrangements the estimates of average compensation for these types of travel arrangements may not be very robust.

Our estimates suggest that gross detriment per problem for dynamic packages is of similar size to gross detriment per problem for sets of independent travel arrangements (€593 and €565 respectively). Gross detriment per problem is €191 for traditional packages and is thus much smaller than for the other two types of travel arrangements (Figure 64). These conclusions hold even if we control for the value of the packages (Figure 65).

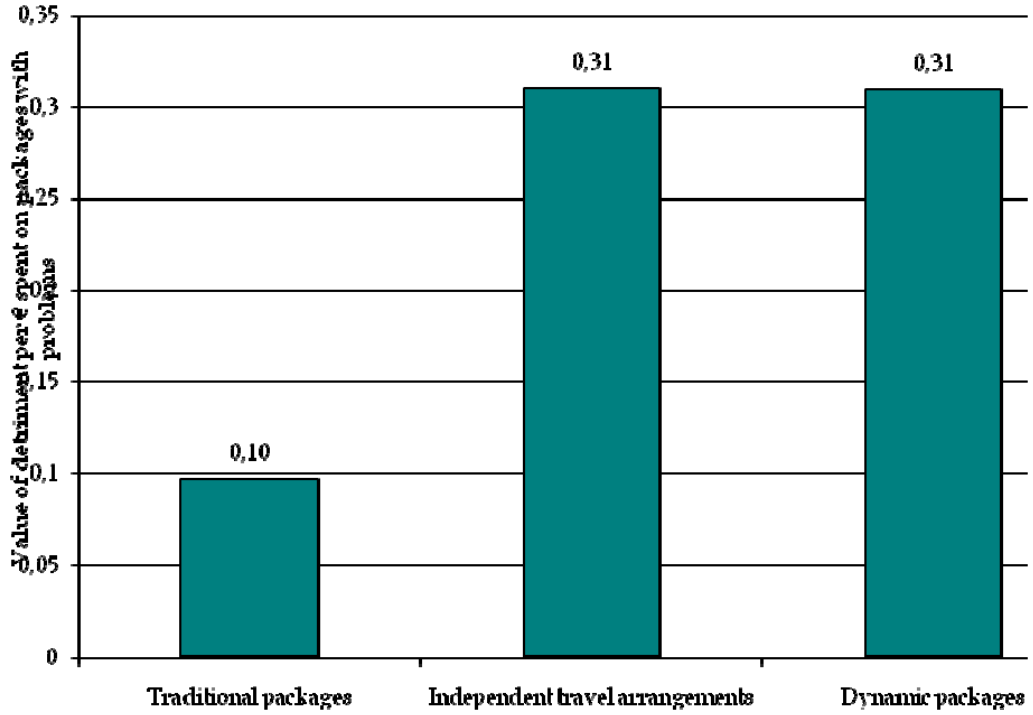
It is also worth noting that gross detriment per problem for traditional packages is estimated to be €91 smaller than the corresponding figure for dynamic packages purchased using only one website (i.e. packages appearing to be within the scope of the directive).

Figure 64: Gross detriment per problem by type of travel arrangements



Note: EU-17 is calculated as a weighted average of the 17 country estimates. Estimates for dynamic packages rely on 593 observations, estimates for traditional packages are based on 72 observations, and estimates for independent travel arrangements are based on 41 observations.
Source London Economics:

Figure 65: Gross detriment per € spent on holidays with problems - by type of travel arrangements



Note: EU-17 is calculated as a weighted average of the 17 country estimates. Estimates for dynamic packages rely on 593 observations, estimates for traditional packages are based on 72 observations, and estimates for independent travel arrangements are based on 41 observations.
Source London Economics:

To obtain an estimate of total annual gross detriment in EU-27 we cannot rely on the same methodology as we did for dynamic packages because the survey design does not enable us to make reliable estimates of the prevalence of these types of travel arrangements in the general population. Instead we use the following methodology:

Box 4: Annual gross detriment in EU-27 for traditional packages and independent travel arrangements

Annual gross detriment in EU-27 =

Gross detriment per person affected by problems x size of market segment x incidence of problems

where

Gross detriment per person affected by problems =

Gross detriment per problem / average number of people affected by problems

Size of market segment =

Total number of trips made by Europeans x market share

By dividing the gross detriment per problem by the number of people travelling on the trip we get detriment per person affected by problems. This figure is then multiplied by the size of the market segment (i.e. the number of traditional package holiday trips and the number of trips with independent travel arrangements respectively) and by the incidence of problem for each type of travel arrangements.

We use the estimates above for gross detriment per problem for each type of travel arrangements and we survey estimates of the average number of people travelling (Figure 39) and the incidence of problems by each type of travel arrangement (Figure 48). Finally, we use market data to estimate the total number of trips made by Europeans and the share of these which were traditional and independent travel arrangements respectively.

According to Eurostat data[33], Europeans made approximately 500 million holiday trips in 2008. Eurostat categorise these trips into 'packages', 'use of travel agent, tour operator', 'direct reservation with transport/accommodation provider' and 'no type of organisation'. If we assume that 'packages' correspond to traditional travel packages, approximately 15% of holiday trips are classified as traditional packages implying that about 75 million traditional packages were sold in EU27 in 2008.

Eurostat publishes data on the number of trips booked using travel agent or tour operators. These figures appear to include traditional packages and some dynamic packages booked through travel agents or tour operators. An estimate of the size of the market segment for dynamic packages can therefore be obtained by factoring out traditional packages (15% in 2008) from all trips booked using travel agents or tour

[33] Own calculations based on the Eurostat database which is available at http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search_database

operators (approximately 28% in 2008). This suggests that approximately 13% of all trips in EU27 can be classified as dynamic packages. This is equivalent to about 65 million dynamic packages being sold in EU27 in 2008

This approach possibly underestimates the share of dynamic packages on overall travel. For example, when travellers go to a low cost airline website to purchase an airline ticket and then click-through to reserve accommodation and/or other elements of the trip, they will be purchasing a 'dynamic package' but have not used a travel agent or tour operator.[34] Unfortunately, the categorisation used by Eurostat does not allow us to make an estimate of how significant this sub-segment may be. As such we keep with the conservative estimate above.

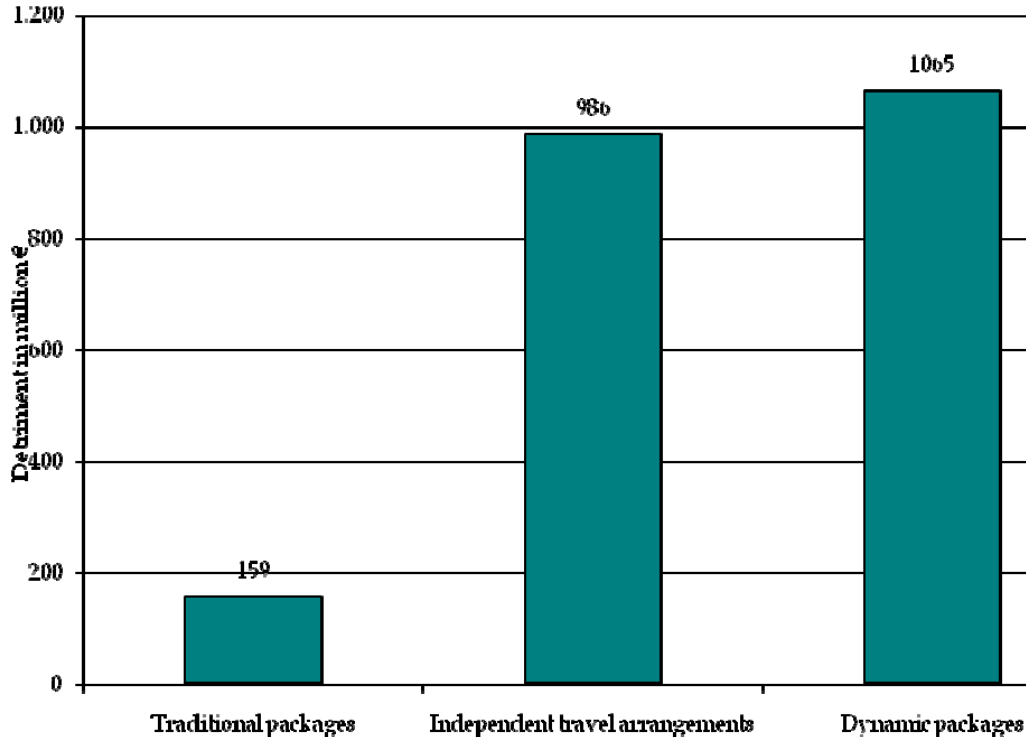
This seems to suggest that the market for independent travel arrangements represents 72% of all trips[35] or a total of 360 million trips. This seems well in line with the findings of a Eurobarometer survey which concluded that 72% booked travel/accommodation individually for their main holiday trip or booked travel *or* accommodation through a travel agent (this could also mean e.g. Expedia)

Given the methodology in Box 4, we estimate total gross consumer detriment from traditional packages to €159 million and total consumer detriment from independent travel arrangements to €986 million (Figure 66), implying that dynamic packages cause more detriment than any of the other types of travel arrangements. This is partly because the incidence of problems is higher and partly because detriment per problem is higher for dynamic packages than for the two other types of travel arrangements.

[34] On the other hand, the results obtained under this approach match quite well with the direct estimation of consumer detriment based on survey replies. As such, we feel that the estimates presented here should provide a good approximation.

[35] Calculated as: 100% - share of traditional packages – share of dynamic packages = 100% - 15% - 13% = 72%.

Figure 66: Gross annual detriment in EU-27 by type of travel arrangements



Source London Economics:

5.7 Assessment of structural detriment

The possibility of consumer detriment arising from the purchase of dynamic travel packages relates mainly to the level of consumer protection that these purchases offer when compared with the more traditional travel packages. The Commission frames the potential for detriment in the following way:

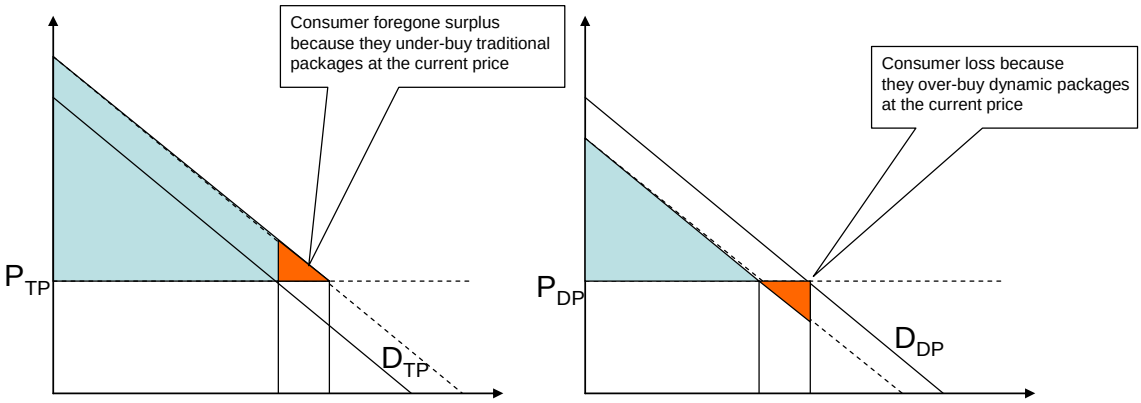
> The Commission has been made aware of an increasing trend, in some Member States, for consumers to put together their own holiday components from different organisers (so called dynamic packaging), instead of opting for packages pre-arranged by an organiser or a retailer. One consequence of this, in some parts of the EU at least, may be that the sale of package holidays now constitutes a smaller proportion of total travel sales than at the time of the adoption of the Directive. The regulation of these dynamic packages seems to be an issue in a number of Member States. It may not always be clear which travel arrangements are covered by the Directive. For instance, after booking a flight on a website of a low cost airline, the consumer may be prompted to book a hotel and/or car rental and is then directed to separate websites. If the bookings of the different services are subject to separate contracts made with distinct companies and with separate payments, the package may not be covered by the Directive. Often it is not made clear to the consumer that different protection applies for more or less identical travel packages, which are sold differently. This uncertainty and possibly divergent interpretations of the Directive by the Member States may affect competition and consumer protection.[36]

In other words, traditional packages and dynamic packages are closely substitutable but consumers who buy dynamic packages might not have done so if they had known that these packages do not offer the same level of consumer protection as traditional packages. Conversely, consumers might have bought more traditional packages if they had been aware of the value of consumer protection that was included in the purchase price.

The situation is, in very simple terms, depicted below. Consumers may fail to make the best choices because the demand function that is observed in the marketplace is different from the demand function that would translate actual consumer valuation for the purchase.

[36] Working Document on the Council Directive 90/314/EEC of 13 June 1990 on package travel, package holidays and package tours, Brussels, 26.07.2007.

Figure 67: Impact on consumer surplus of uninformed purchases of dynamic and traditional packages



In the figure above we depict a simple equilibrium with constant marginal cost in the two markets – the market for traditional travel packages (TP) and the market for dynamic travel packages (DP). The solid curve demand is the demand observed in the market. The dashed line demand curves are the demand curves that reflect actual valuation when taking into account the differing levels of consumer protection offered by the two types of package.

In light blue we depict the level of consumer surplus currently obtained in each market. The small orange triangles reflect detriment arising to consumers because of not making choices in accordance with actual valuations. In the market for traditional packages, consumers buy too little at the current price because they fail to take into account the value added by the consumer protection. On the dynamic package market, the converse happens: consumers over-purchase when considering how they might substitute between TP and DP.

The lack of clarity that the current state of the package travel Directive brings to consumers is thus likely to result in market equilibria that are inefficient. This may manifest in a combination of excessive quantity and excessive price in DP market and lower than optimal transactions and prices in the TP segment.

However, we need to look at more than just the demand side. It is important to take into account that supply is not offered at constant marginal cost and, more importantly, that providing consumer protection is costly for suppliers. Thus, in the current situation we have the TP suppliers making some investments and incurring some costs in order both to minimise the likelihood of incidents for consumers and to compensate consumers if incidents do occur.

At present, suppliers in TP incur these costs only to the extent that they have to or that they see them as cost effective ways to meet their obligations under the Directive. When consumers purchase their packages they are unaware of these incurred costs by the suppliers. In a market where demand elasticity is large (as is likely to be increasingly the case in the consumer travel sector) these higher costs can have a devastating impact on these suppliers. Concurrently, the observed market equilibrium may entail much lower quantity of the good on which consumer information is incomplete than the efficient quantity in a complete information setting.

Another effect of the lack of information about the differences in attributes of the services offered in the two market segments is to distort competition among suppliers operating in the different segments. Given that the differential value of consumer protection is not well understood by potential buyers, sellers have an incentive to offer as little protection as they legally can. This may be sub-optimal because some consumers possibly value buying a travel service that has certain guarantees attached. If it was easy to convey information on this to consumers, we could see the market segmenting into packages that offer different levels of consumer protection and consumers selecting the package that most closely matches their preferences.

Where consumers are unaware of the protection offered by some services, sellers whose services offer high levels of protection have trouble competing with sellers that offer no protection. These can sell at a lower price because they incur fewer costs, without the impact of these lower costs being perceived by consumers. The result is likely to be that prices do not mirror value and that consumers choose too much of the good without protection and too little of the good with protection. This can significantly impact market structure e.g. driving sellers of TP to abandon that business model and move into supply of DP. Measurement of market distortion effects

The next step in the analysis of structural detriment is to consider how to measure the effects that we have described above.

The extent to which market outcomes are sensitive to this asymmetry in consumer protection depends on the following main elements:

- How much consumers value that protection
- How price-sensitive demand is
- What fraction of consumers are indeed unaware of the different levels of consumer protection in TP and DP
- What are the costs for suppliers of offering the consumer protection required by the Directive

- Whether these costs (in per unit terms) would increase or decrease for larger volumes of sales

- How differences in costs are reflected in prices

The value of consumer protection

The most immediate way to try to proxy the value of consumer protection is to look at the prices of different types of travel insurance. However, standard travel insurance policies typically include broader coverage than that provided by the Directive and therefore travel insurance premiums are likely to overestimate the value of protection. In addition, it should be noted that not all consumers choose to purchase travel insurance. They may prefer to 'take the risk' rather than pay the cost of the insurance. For these consumers, the value of protection is lower than the price of the insurance. As a result the price of travel insurance would tend to overestimate the average valuation for travel protection in the population. Ideally, we would need to take travel insurance premia as a starting point and then correct downwards according to the proportion of travellers that choose not to purchase protection and according to how much lower protection under the Directive is than under a typical travel insurance policy.

An alternative approach would be to compare the prices of identical travel services when sold as traditional packages and when sold as dynamic packages. The difference in prices should reflect the difference in the costs of providing protection. There are several problems with this approach though: it would be quite difficult to find identical combinations of travel services sold under the two different types of packages to calculate the respective price difference; prices may not be fully reflective of costs – prices are perfectly aligned with costs only under an extreme assumption of perfect competition; finally, costs may be different from consumer valuation. .

The price sensitivity of demand

In order to estimate the price sensitivity of demand for dynamic packages one could resort to estimates of price elasticity of demand from other studies in the area of travel and tourism and demand for recreational activities in general[37].

There are, however, some difficulties involved with this approach. Firstly, price sensitivity may be country specific and may depend on income levels and vary significantly among different segments of the travel market. Estimates based only on data from high income countries are likely to underestimate price elasticity (Finke et al, 1984).

Secondly, the price elasticity may vary for different destinations depending on the supply and demand of holidays to the destination. For instance, a business trip to

[37] See for instance Allen et al (2009), Brons et al (2002), Finke et al (1984). Carpio et al (2008)

Stockholm and a package holiday to Spain may not be substitutes but a large supply of holidays to Spain may imply that the trip to Spain offers much better value for money (see also Brons et al, 2002 for a discussion of this). Therefore, if we use price elasticity estimates from air travel which includes also business travellers we may overestimate price elasticity.

Thirdly, some types of holidays may be best described as luxury goods while others might be better described as normal goods. For instance, domestic holidays may substitute for international travel (Allen et al, 2009) and international travel may be considered luxury goods while domestic travel is considered normal goods. It is widely recognised that, at least in important market segments, demand appears to be very price sensitive. It is unlikely that this would be the case in the luxury segments of the market.

The empirical literature estimating price elasticity of air travel, tourism or recreation is vast. Finke et al (1984) find own-price elasticities for recreation to be in the range of -0.74 to -0.49 for European countries[38] in 1975. The price elasticity is generally lower for high income countries than for low income countries. However, Brons et al (2002) do not find evidence that price elasiticity in Europe is statistically different from price elasticity estimates based on US data.

Brons et al (2002) provide a meta-analysis of 204 studies estimating the price elasticity of air travel. They report an average price elasticity of -1.146 and a range from -3.20 to 0.21. It is worth noting that the average price elasiticity estimates are much larger in absolute terms than those provided by Finke et al (1984). This is despite the fact that there is evidence that travellers have become less price sensitive over time and despite the fact that the estimates by Brons et al (2002) include business as well as leisure travel (Brons et al, 2002). Brons et al (2002) show that business travel generally is less price sensitive (close to zero) than leisure travel.

The explanation for the differences may be that air-travel has a higher level of price-elasticity than tourism and recreational activities in general. This interpretation seems to be supported by a number of other studies from the literature of recreation and tourism demand. For instance, Carpio et al (2008) find an own-price elasticity of farm recreation trips of -0.43 and in a meta-analysis of 1,227 price elasticity estimates for international tourism demand Crouch (1992) reports an average of -0.39 with 60% of the estimates having the expected negative sign. It should be noted that it may be inappropriate to include the estimates with a positive sign in the average because the positive sign may reflect a misspecification of the model. Therefore, the average of -0.39 may overestimate the price elasticity. Other more recent studies of tourism demand typically provide estimates of price elasticity of around -0.5 with a range from -0.016 to -1.06.[39]

[38] Countries included in the study include, Poland, Ireland, Hungary, Italy, Spain, the UK, the Netherlands, Austria, Germany, France and Denmark.

[39] See summary table in Munoz (2007).

Fraction of 'unaware' consumers

In terms of the fraction of consumers that are unaware of the different levels of protection offered in each market segment, we draw on the findings of the consumer survey. One of the questions addresses perceived financial protection. The survey suggests that there are large cross-country differences in the perceived financial protection.

On average, the survey results indicate that about 80% of those who have taken dynamic package holidays believe that they are financially protected in the event of bankruptcy of one of the service providers. In fact this is unlikely to be the case for a majority of dynamic package travel arrangements (all of those who fall outside the current scope of the Directive). However, some dynamic travel arrangements are covered by the Directive. In Figure 36 and Figure 37 we have the percentage of those who made dynamic travel arrangements that almost surely are not covered by the Directive (separate billings from different sellers and components not purchased at the same time). According to the data in the figures, out of these respondents, about 68% believe that they are entitled to refunds in the event of bankruptcy of one of the service providers. The percentage in our sample of travellers falling under each of the two conditions above (bought at separate times and/or received more than one billing from different sellers) is 40%. We therefore utilise for our calculations the value of 27%=68%x40% for the percentage of dynamic package purchasers mistakenly expecting a higher level of protection than they would be likely to receive.

As such, we estimate that 27% of dynamic package travellers wrongly believe they are protected against losses due to bankruptcy of one of the service providers.

5.7.1 The case of variable costs

On the cost side, we need to consider whether the analysis would be significantly different if we had increasing unit costs or decreasing unit costs as opposed to constant unit costs as assumed in the analysis above.

We have not gathered data on cost structures for the travel package market , however it is possible that are both increasing a decreasing costs in different market segments. Unit costs may decrease as the quantity supplied increases because sellers, when selling large quantities, manage significant discounts from the service providers. In addition, all costs that are fixed or quasi-fixed contribute to decreasing unit costs (e..g. unit costs decrease when an increase in the number of passengers helps to fill planes to particular destinations or help fill a certain allocation of hotel rooms).

However, unit costs may be increasing when we consider quantity levels at which capacity is exhausted. The provision of additional services at peak times of the year can be an example. The first few passengers to a new destination add more cost than when additional passengers are added to a popular destination.

Our analysis implicitly assumes that passengers consider traditional travel packages and dynamic travel packages as close substitutes. This is an important element when analysing the impact of different cost structures on structural detriment because cost structures are likely to be similar across the different types of packages.

If unit costs are decreasing, additional purchases of dynamic packages will make unit costs go down. So, although marginal passengers are receiving a negative surplus from the purchase (what they pay is less than their true valuation for the service), some of the decrease in cost may be passed on to all travellers. The extent to which it will be passed on depends on how competitive the industry is. In the presence of a high degree of price discrimination, for example, cost-savings pass on to infra-marginal[40] customers will be low.

In addition, customers who chose dynamic packages may have chosen them *instead of* traditional packages. If unit costs are decreasing in relation to traditional packages then this switch of customers from one type to the other would make unit costs go up in traditional packages. As a result, to the possible benefit from lower costs in dynamic packages would correspond a possible loss in traditional packages due to higher costs.

If the cost structures of the several types of travel arrangements are similar, then there is little effect on overall consumer surplus from consumers switching between different types of packages. There could however be an argument that economies of scale are more important in traditional packages than in dynamic packages. Traditional package provision has a higher set-up cost because of the additional services that traditional package providers also offer. In this case, the fact that consumers switch from traditional packages to dynamic packages would cause unit cost go up in traditional packages and this increase would not be compensated by a commensurate decrease in the dynamic package segment, leading to a net loss in terms of cost inefficiency, in addition to the loss discussed above affecting consumers who are unaware of the differences in consumer protection.

[40] The term 'marginal customers' describes buyers who made the purchase at the going price but would not have bought at any higher price; the term 'infra-marginal customers' applies to buyers who might have bought even at a slightly higher price.

6 Discussion of the methodology and conclusions of the study

In this final section we provide a brief discussion of the methodology employed by the study and of the interpretation of our results in terms of estimates of personal and structural detriment.

6.1 Methodology for consumer detriment estimation

This study provides a very comprehensive approach to the estimation of personal consumer detriment in the market for dynamic travel packages. Our results are based on a detailed survey covering 17 EU countries and a total of more than 49,000 respondents (before screening for past users of dynamic travel packages) and 8,500 respondents who had previously made dynamic travel arrangements.

Our survey allowed us to estimate incidence of dynamic travelling in the EU 27 population, incidence of problems with such travel arrangements and incidence of costs associated with those problems. Costs were considered both gross and net (after eventual compensation was received).

Our methodological approach did not directly seek to calculate similar incidences and costs for other types of travel arrangements. It does not, therefore, provide the same level of statistical significance for the comparison of consumer detriment in dynamic and traditional travel packages. However, we had enough responses overall to conclude that gross personal detriment in traditional packages, at an estimated €159 million, is considerably below that in dynamic packages - €1,065 million. The difference is likely to be even larger for net detriment given that consumers are more likely to receive compensation for problems with their travel when using traditional packages than when doing other type of travel arrangements.

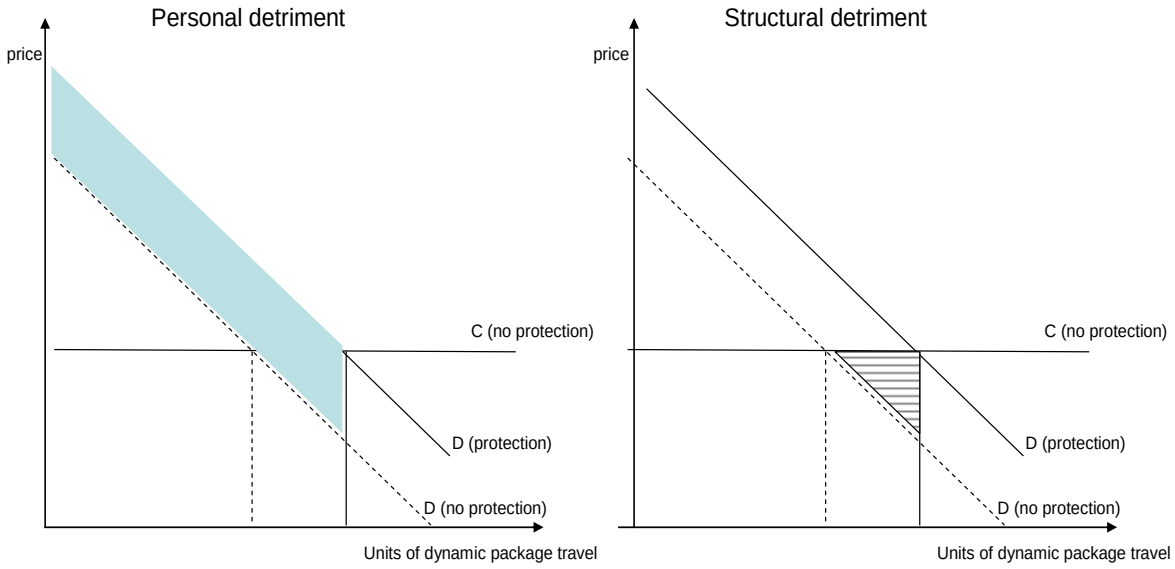
Our analysis of structural detriment looked not at problems for individual travellers but at the possibility of the market getting to the 'wrong' equilibrium, where prices and quantities transacted are suboptimal for consumers. We did not make a numerical estimate of this effect because of the very large number of assumptions that we would have to make in order to reach such an estimate. However, given that a large fraction of consumers in our survey were uninformed about the differing levels of consumer protection offered by different travel arrangements, and given the large and growing size of dynamic packages within the overall travel services market, the value of structural detriment is likely to be significant.

From a methodological point of view it is interesting to discuss how future studies of consumer detriment might look at combining figures for personal detriment and for structural detriment to reach an overall determination of consumer detriment in a given market .

The personal detriment analysis looks at those who have bought dynamic packages and measures the incidence and level of costs incurred as a result. It does not, therefore, take into account potential savings that dynamic package sellers may have offered due to the lower protection level. Under an assumption of perfect competition, the savings consumers could make with dynamic packages should be commensurate to the costs with consumer protection that are incurred by traditional package providers. In expectation, therefore, and, again, under perfect market conditions, the aggregate personal detriment suffered by dynamic package purchasers, in excess of that which is suffered by traditional package purchaser, should be equal to the value (price and cost) of providing consumer protection in relation to dynamically packaged holidays.

To illustrate this discussion, in the figure below we place side-by-side the graphical description of personal and structural detriment in the dynamic package travel market.

Figure 68: Personal detriment and structural detriment: graphical analysis



Note: The shaded area represents an equivalent measure of personal detriment – if insurance costs reflect expected loss and if dynamic packages are discounted by the amount of those insurance costs, then the shaded area represents the expectation of the value of problems aggregated across all purchasers of dynamic packages.
Source: London Economics

Only a fraction of our estimate of personal loss can in fact be considered structural loss, in the sense of loss that reduces consumer surplus. If a consumer saves on protection costs and then suffers a loss but in aggregate the cost of the losses is equal to the savings in insurance, there is no net reduction in consumer surplus. But not all the losses are compensated by savings on consumer protection costs. Because some

consumers are unaware of the low level of protection, they put a value on the purchase that is higher than their actual valuation and therefore over-purchase dynamic travel. For these consumers, the price paid plus the expectation of (uncompensated) loss is higher than their valuation. This is the way in which we define and calculate structural detriment.

In our study, therefore, structural detriment is a sub-set of personal detriment. It corresponds to that part of personal detriment that is incurred but that is not compensated by lower prices. For personal detriment, we include all personal injury and costs incurred by dynamic package travellers.

Which of the two measures is best is a difficult question to answer. Personal detriment estimates the value of harm actually suffered by consumers. It is therefore indubitably a measure of great relevance for consumer policy. Structural detriment is a measure of the sub-optimality of the market outcome and perhaps more adequate from the perspective of a potential regulatory intervention.

6.2 Evidence gaps

In relation to our analysis of personal consumer detriment in the dynamic package travel sectors, we do not feel that there are any significant evidence gaps that could affect the estimates that have been presented. Our estimates of personal detriment in relation to other types of travel arrangements are less statistically robust because they relate to fewer data points and because they rely on a sub-sample that is selected on the basis of respondents having travelled on a dynamic package before and not having had problems with any such instance of dynamic package travel. These two limitations could be addressed by boosting the sample and by asking all respondents about problems with other types of travel arrangement.

As for the analysis of structural detriment, as we have noted, a number of simplifying assumptions are made which would require testing and would potentially have to be replaced by more realistic ones. In particular, the market for dynamic package travel, as well as other segments of the travel market, may depart quite significantly from the 'perfect competition' situation that we have depicted in our simplified graphical analysis.

For example, where we assume that prices in the dynamic travel segment reflect the lower costs that suppliers have due to not offering the same level of consumer protection, it may be that in fact prices are not as low as they could be under perfect competition. A more in-depth analysis of competition in the different segments of the travel industry would be required in order to judge how much of the cost differences are likely to be reflected in prices.

Another way in which markets may depart from the perfectly competitive benchmark is through 'price discrimination'. Price discrimination can take many forms but essentially refers to any practice of selling very similar products or services at different prices to different buyers, according to their ability/willingness to pay.

Price discrimination allows sellers to sell products at prices that are determined by consumers' willingness to pay more so than by seller cost. Such practices are probably quite common in the travel sector. Travel companies may operate several brands where each brand targets different demand segments, may offer discounted last-minute bookings, super-luxury holidays, bargain holidays, etc. The structural detriment 'triangle' that we identified in Section 0 would be present in relation to each one of these segments. In the extreme case of price discrimination, where all buyers pay exactly the maximum that they are willing to pay, there would be a negative effect (of the type discussed in Section 0) on all buyers that were uninformed about the different level of consumer protection afforded by traditional and dynamic packages. A more thorough analysis of the market structure of the travel market would thus be required to make a more accurate estimate of structural detriment.

While perfect competition may be an inadequate representation of the dynamic package travel market, the impact of the entry into the travel market of sellers of dynamic travel packages can have value to consumers in at least two ways. First, it enhances competition among travel services providers and may contribute to drive down the prices of traditional packages. Secondly, it increases consumer choice and allows those who value consumer protection least to purchase travel services that do not include such protection. To assess the first of these effects we would need to look at price data for traditional travel packages and data on entry of new operators to see if there has been an impact on pricing, once we control for other effects that may have an impact on price. However, the fact that there are so many different types and combinations of travel services, makes price comparisons across market segments quite difficult. To assess the second, we could resort to purchase data, price differences and, ideally, some limited survey data asking consumers about their valuation for different characteristics of dynamic packages.

6.3 Conclusions of the study

We have looked at the detriment suffered by consumers in the market for dynamic package travel. Personal consumer detriment was estimated at €1,005 million, on a yearly basis and in aggregate across the 27 EU Member States.

The major sources of costs to consumers that have problems are replacement and follow-on travel and accommodation costs with, on average, about 44% of the total.

We have found evidence that significantly higher levels of detriment are associated with more complex dynamic travel arrangements. For travel arrangements that are likely to be covered by the Directive, the expected detriment per problem is less than half the corresponding value for problems occurring with travel arrangements with more than one billing and those not made simultaneously.

Our analysis also pointed to a potentially significant high level of structural detriment arising as a result of consumers lacking the information to adequately

compare service offerings from traditional package suppliers and dynamic package suppliers.

7 References

Allen, David, Yap, Ghialy, and Shareef, Riaz (2009). 'Modelling interstate tourism demand in Australia: A co integration approach', *Mathematics and Computers in Simulation*, Vol. 79, 2733-2740.

Amoako-Tuffour, Joe and Martınez-Espineira, Roberto, 2008, 'Leisure and the Opportunity Cost of Travel Time in Recreation Demand Analysis: A Re-Examination', Munich Personal RePEc Archive.

Becher, Shmuel I. (2007), 'Asymmetric Information in Consumer Contracts: The Challenge That is Yet to be Met', SSRN id1016002

Bin, O., C. E. Landry, C. Ellis, and H. Vogelsong (2005). Some consumer surplus estimates for North Carolina beaches. Marine Resource Economics 20 (2), 145-161.

Brons, Martijn, Pel, Eric, Nijkamp, Peter and Rietveld, Piet (2002). 'Price elasticities of demand for passenger air travel: a meta-analysis', *Journal of Air Transport Management*, Vol. 8, 165-175.

Carpio, Carlos E., Wohlgenant, Michael K. and Boonseang, Tullaya (2008). 'The Demand for Agritourism in the United States', *Journal of Agricultural and Resource Economics*. Vol. 33(2), 254-269

Cesario, F. (1976). 'Value of time in recreation benefit studies.' Land Economics 52, 32-41.

Crouch, Geoffry I. (1992). 'Effect of income and price on international toursim', *Annals of Tourism Research*. Vol. 19, 643-664.

Englin, J. and T. A. Cameron (1996). 'Augmenting travel cost models with contingent behaviour data: Poisson regression analyses with individual panel data.' Environmental and Resource Economics 7, 133-147.

EC DG Enterprise and Industry (2009), 'Study on the Competitiveness of the EU tourism industry: with specific focus on the accommodation and tour operator & travel agent industries', Report prepared by ECORYS SCS Group.

EC DG SANCO (2007), 'Assessing the Impact of Policy on Consumer Detriment: A Handbook for the European Commission'. A report by Europe Economics available at http://ec.europa.eu/consumers/strategy/docs/study_consumer_detriment.pdf.

Finke, Renarte, Lu, Wen-Hun and Theil, Henri (1984). 'A cross-country comparison of own-price elasticities of demand', *Economic Letters*. Vol. 14, 137-142.

Hagerty, D. and K. Moeltner (2005).' Specification of driving costs in models of recreation demand'. Land Economics 81 (1), 127-143.

Hellerstein, D. and R. Mendelsohn (1993). 'A theoretical foundation for count data models'. American Journal of Agricultural Economics 75 (3), 604-611.

Ipsos (2006). 'Consumer Detriment Survey'. Draft Report.

Lande, Robert H. (2007), 'Market Power Without A Large Market Share: The Role of Imperfect Information and other "Consumer Protection" Market Failures', The American Antitrust Institute, AII Working Paper No 07-06, available at http://ssrn.com/abstract=1103613

Liston-Heyes, C. and A. Heyes (1999). 'Recreational benefits from the Dartmoor National Park'. Journal of Environmental Management 55 (2), 69- 80.

Martin, Andy (2004). 'The Changing Face of Travel in Britain'. MORI.

Munoz, Teresa Garin (2007). 'German demand for tourism in Spain', *Tourism Management*. Vol. 28, 12-22.

Office of Fair Trading, (2000). 'Consumer Detriment'. OFT296.

Office of Fair Trading, (2006). 'Focus Group research on consumer detriment'. Prepared for the Office of Fair Trading by FDS International. OFT826.

Office of Fair Trading, (2008), 'Consumer Detriment: Assessing the frequency and impact of consumer problems with goods and services'. OFT992

Sarker, R. and Y. Surry (1998). 'Economic value of big game hunting: The case of moose hunting in Ontario'. Journal of Forest Economics 4 (1), 29-60.

Sohngen, B., F. Lichtkoppler, and M. Bielen (2000). 'The value of day trips to Lake Erie beaches'. Technical Report TB-039, Ohio Sea Grant Extension, Columbus OH.

Thomas, William R., Shuptrine, F. Kelly, and Sharma Alok (1979), 'The plight of the discontented consumer', *Journal of Consumer Studies and Home Economics*, Vol. 3, 161-171.

Annex 1 Package travel consumer detriment questionnaire

INTRODUCTION

Good afternoon/morning/evening, my name's [---], I'm calling from Ipsos, a research company on behalf of the EUROPEAN COMMISSION. We're conducting a study as **the commission** would like to understand more about the general publics experiences with the travel industry.

– IF NECESSARY

The information will be used by the EUROPEAN COMMISSION to help with regulating the travel industry.

This survey is completely anonymous and all answers are strictly confidential.

The survey should take about 15 minutes to complete.

- IF NECESSARY IN CASE THE RESPONDENT STATES THAT HE/SHE DOES NOT TRAVEL

'In that case can I just check that you have not been away for 2 days or more at any occasion in the past two years?

BACKGROUND QUESTIONS

Question 1: INTERVIEWER RECORD GENDER

Male	1
Female	2

Question 2: Firstly, for classification purposes……

Can you tell me your age? IF NECESSARY Are you...?

15 years and below	1*
16 – 19 years	2
20 – 24 years	3
25 – 29 years	4
30 – 34 years	5
35 – 39 years	6
40 – 44 years	7
45 – 49 years	8
50 – 54 years	9
55 – 59 years	10
60+ years	11
Refused	12

* [THANK AND TERMINATE]

Question 3: ASK FINLAND MOBILE SAMPLE ONLY

In which of the following regions do you live? SINGLE CODE ONLY

South	1*
South West	2
South East	3
West	4
East	5
North	6

ALLOW DK AND REFUSED

QUESTIONS ABOUT DYNAMIC PACKAGES

In this survey we wish to focus on "dynamic package travel", which refers to purchasing two or more items or services for a single holiday or trip, such as flights, accommodation or car rental, at the same time and from the same supplier **or** from suppliers that are commercially linked, such as travel agents, airlines or holiday companies.

- The following are not considered to be dynamic packages;
- Where flights only, hotel only, car rental only are booked;
- Where each component has been booked through separate suppliers/channels chosen independently by the customer; and
- A traditional package holiday - Where all components are part of a package with a set price for the whole package (i.e. the package has been assembled before being offered to the customer) (a traditional travel package).

Question 4:

a) In the past two years, have you used a web page to book one element of your trip (e.g. the flight) and then have been redirected and booked another element through a partner website?

Yes/No

b) In the past two years, have you booked an airline/train or ferry ticket directly through an airline /train/ferry company and chose to book accommodation or car rental through the same source?

Yes/No

c) In the past two years, have you booked 2 or more components of your travel from a same seller or using a single website (such as Expedia or Lastminute – *adapt to country specific exam*ples). You had the choice whether to add or exclude additional elements from your trip.

Yes/No

d) In the past two years, have you booked 2 or more components of your travel from high street travel agency? You had the choice whether to add or exclude additional elements from your trip.

Yes/No

e) In the past two years, have you booked any other dynamic travel package (i.e. the package has been assembled by the customer and was not on offer for a set price)?

Yes/No

If No to all Q4 THANK AND CLOSE

Question 5: What led you to purchase a dynamic travel package rather than a more traditional holiday package? MULTICODE (read out)

1) The dynamic package allowed greater flexibility
2) The dynamic package was cheaper
3) The dynamic package offered higher quality choices
4) No traditional holiday package was available for the trip I wished to make
5) Other – please specify

Question 6: I would like you to tell me if IN THE LAST 2 YEARS OR SO have you PERSONALLY experienced a problem with this type of dynamic package travel and, if so, how often has this happened

1) No, never GO TO Q9
2) Yes, once
3) Yes, twice
4) Yes, on three occasions
5) Yes, on four occasions
6) Yes, on five or more occasions
7) DK GO TO Q9

INTERVIEWER NOTE: PLEASE BE SURE THAT THE NUMBER OF INCIDENCES RECORDED ARE 'SEPARATE' INCIDENTS AND ARE NOT PART OF THE SAME PROBLEM.

Question 7:

IF 1 PROBLEM SAY

> We are going to ask you several questions about your problem and to make this easier could you give me the destination?
>
> [LABEL PROBLEM by destination] and GO TO Q8

IF MORE THAN 1 PROBLEM SAY

So as not to take up too much of your time today, I'll just ask questions about the most major incident.

We're going to ask you several questions about this problem and to make this easier could you give me the destination for the one you consider to have been the major problem?

[RECORD LABEL AND USE FOR THE DETAILED QUESTIONS ABOUT THE PROBLEMS ENCOUNTERED] and GO TO Q8

READ OUT – (Pre amble for why we're doing the research) - The following questions will ask for more details on the specific problems you have encountered. We're asking in some detail because the research we're doing is intended to feed into regulatory work the European Commission is doing on the package travel industry.

Question 8 Thinking about your trip to [INSERT DESTINATION LABEL FROM Q4 OR QB3], can you provide more details about the nature of the problem?

[OPEN ENDED] [PROBE FULLY]

[INTERVIEWER NOTE: USE LIST BELOW ONLY AS A PROMPT IF RESPONDENT IS UNSURE HOW TO ANSWER QUESTION]

INTERVIEWER: SCAN THE PROBLEMS AGAINST A LIST WITH EXAMPLES OF "REASONABLE PROBLEMS"

PLEASE PROVIDE INTERVIEWERS WITH THE LIST BELOW ON A SEPARATE SHEET – THE EXAMPLES DO NOT NEED TO BE PART OF THE SCRIPT

1) The items or services provided were substandard, e.g.:

- Transport related services, such as flights, trains, ferries, etc, were substandard
- Accommodation related services were substandard
- Transfer services, for example between hotels and airports, were substandard
- Food was substandard
- Car rental services were substandard
- Other items or services, not ancillary to the above, were substandard

2) Suffered illness or injury caused by using one or some of the travel services

3) Items or services were not provided, incomplete, or delivered late:

For example, travel between two destinations including transfers was not provided

For example, car rental services were delayed

For example, transfer services were delayed

Items or services were not as expected, descriptions were incorrect or substantially incomplete e.g.:

For example, the qualities or location of the hotel were not as expected

For example, some items, such as meals, were not included in an 'all-inclusive' package

For example, the type of car provided by the rental company was not as expected

4) Selling techniques, e.g.:

- Things the salesperson claimed about the price, quality, service etc that turned out to be incorrect
- Misleading advertisements about price, quality, service etc
- Important information about the purchase, or about the items or services themselves was not provided to you
- Sold inappropriate product or put under pressure to buy
- Misunderstood contract terms or conditions OR unfair terms and conditions in contracts or one-sided contracts that allow the provider of the items or services to opt out or change the price, quality etc.
- Final charge exceeded quoted price
- Difficulty in getting problems fixed, including inadequate offers by the seller after you told them about the problem.

5) Other, e.g.:

- Bankruptcy of company

NOTE TO INTERVIEWERS: Q9 to Q17 CAN BE ASKED TO ALL BUT IN CASE THERE HAVE BEEN NO PROBLEMS WITH DYNAMIC PACKAGES, THE QUESTIONS SHOULD REFER TO 'YOUR LATEST DYNAMIC PACKAGE HOLIDAY'

Question 9: How many people travelled or were expected to travel with you as part of that package (including yourself)?

1) 1 person only
2) 2 persons
3) 3 persons
4) 4 persons
5) 5 or more

Question 10: How long was that holiday for? DO NOT READ OUT

1) 2 to 3 days
2) 4 to 6 days
3) 7 to 10 days
4) 11 to 15 days
5) 16 to 20 days
6) 21 to 30 days
7) More than 30 days
8) Less than 2 days

Question 11: How did you purchase that package? (multicode response allowed) READ OUT

1) At a travel agent in the high street- go to Q13
2) From a website (internet) go to Q12
3) Over the phone go to Q13

4) Other (please specify) go to Q13

Question 12: Which websites have you used to purchase your package? (allow multicode answers) (*adapt examples locally*) READ OUT

1) An airline website e.g. ryanair, britishairways
2) A travel agency website e.g. tui, neckermann, thomascook
3) An internet-only company website e.g. lastminute, expedia, booking.com,
4) A transport company website (train, ferry) e.g. sncb.be, eurostar.co.uk
5) A car rental company website e.g. hertz.com
6) A hotel/ hostel website
7) Others- specify

Question 13: What was included in the package? (MULTICODE RESPONSE ALLOWED) DO NOT READ OUT – PROBE What else?

1) Flight
2) other transport (train, ferry, bus)
3) Accommodation
4) Car rental
5) Transfers
6) Attractions, shows, excursions
7) Meals or meals and drinks
8) Sports
9) Kids' programmes
10) Cruise
11) Other (please specify)

Question 14: How were the different elements of the package presented to you? (SINGLE CODE read out) NOTE this question is applicable only for those who answered "from a website" in Q11

1) I was recommended additional services on the airline/car rental/travel agent web page and then redirected to other web pages

2) I bought all the elements on the same website and was not re-directed to partner websites

3) I did not purchase all the package elements at the same time

4) Other, please specify

Question 15: How have you been billed for the package? READ OUT

1) I received one billing

2) I received separate billings issued by one company

3) I received separate billings issued by different companies

4) Other – please specify

5) Don't know

Question 16: Imagine that the seller or one of the service providers (e.g. transport company, hotel) of the package you purchased went bankrupt before the start of your trip. Which of the following would you most agree with?

1) I am entitled to get my money paid back from a travel fund

2) I am entitled to get my money paid back from the seller or the service provider

3) I would lose my money

4) Other- please specify

5) I don't know

Question 17: What was the cost of your package? (please include the total cost for all travellers) ADAPT to local currency READ OUT IF NECESSARY

1) Less than €100
2) €100-€200
3) €201-€500
4) €501-€1,000
5) €1,001-€2,000
6) €2,001-€4,000
7) Greater than €4,000
8) Don't know

QUESTIONS ABOUT PROBLEMS

IF NO PROBLEMS REPORTED SKIP ALL THE WAY TO Q28

OTHERWISE ASK ALL QUESTIONS Q18 TO Q27

Question 18: Again referring to the problem/s you mentioned, who if anyone did you complain to regarding the trip to [INSERT DESTINATION LABEL FROM Q7 OR Q30; do not read out]

[MULTIPLE RESPONSES ALLOWED UNLESS DID NOT COMPLAIN]

[REPEAT FOR PROBLEM MENTIONED IN Q7 OR Q30]

Seller from whom I bought the travel services	1
Website where descriptions and information were provided	2
Holiday representative at the location	3
Airline or transport company (in case of ferry, train or bus)	4
Accommodation provider (e.g. hotel)	5
Car rental company	6
Consumer affairs authority [SPECIFY WHO]……	7
Other person or organisation [SPECIFY WHO]……	8
Did not complain	9
Don't know [DO NOT READ OUT]	10
Refused [DO NOT READ OUT]	11

Question 19: We would now like to ask you about the cost of the problem(s) and would like your estimate in (*insert local currency*) of how much you spent on them. Can you tell me how much you spent on...

[RECORD TOTAL LOCAL CURRENCY AMOUNT FOR PROBLEM MENTIONED IN Q7 OR Q30]

[INTERVIEWER PROMPT: PLEASE ONLY INCLUDE 'OUT-OF-POCKET' COSTS/CHARGES. DO NOT INCLUDE COSTS OF PERSONAL TIME]

[INTERVIEWER NOTE: IF RESPONDENT "CAN'T REMEMBER" THEN AN APPROXIMATE AMOUNT IS FINE]

[INTERVIEWER NOTE: PLEASE BE SURE THAT EACH COST RECORDED IS A 'SEPARATE' COST, AND NO COSTS ARE COUNTED TWICE.]

Cost item	Amount
Purchasing replacement or additional items or services: Replacement or additional travel on outward in inward journeys (e.g. flights, trains, etc.) Replacement or additional transfer services (e.g. between airport and hotel) Replacement or additional travel for excursions and day trips, which should have been included in the price of the package) Replacement or additional accommodation Replacement or additional components of an 'inclusive' package, that should have been provided at no extra charge (such as meals) Replacement or additional car rental Replacement or addition of other items or services [SPECIFY]– [INTERVIEWER TO WRITE DOWN TYPE OF COST AND AMOUNT]	
Illness or injury suffered by using the services	
Following up or trying to resolve problem(s) such as: Communication costs such as telephone, internet, postal and stationery costs Travel / petrol / accommodation costs Legal costs Other expert advice costs	
Other 'out-of-pocket costs/charges (not including costs of personal time) [SPECIFY]– [INTERVIEWER TO WRITE DOWN TYPE OF COST AND AMOUNT]	

Question 20: Approximately, how many hours have you spent altogether trying to resolve the problem since it first started?

[RECORD APPROXIMATE HOURS FOR PROBLEM MENTIONED IN Q7 OR Q30]

[INTERVIEWER NOTE: IF RESPONDENT ANSWERS 'A FEW' OR 'MANY' HOURS PROMPT FOR APPROXIMATION]

NUMERIC 0-999

Allow DK

Question 21: Did you get any assistance? If yes, from whom? (MULTICODE)

1) Yes, I got assistance from a seller
2) Yes, I got assistance from a holiday representative at the location
3) Yes, I got assistance from a service provider (e.g. airline, hotel)
4) No, I didn't get any assistance
5) other, please specify

Question 22: And did you ask for any form of (either monetary or non-monetary) compensation?

1) Yes
2) No

Question 23: And did you receive any form of (either monetary or non-monetary) compensation

1) Yes
2) No – GO to Q26

Question 24: What type of compensation did you receive? DO NOT READ OUT – PROBE – Anything else?

1) Replacement services – GO to Q26
2) Upgrades – GO to Q26
3) Voucher
4) Cash
5) Other, please specify GO to Q26

Question 25: What was the amount of the compensation you received? (WRITE IN LOCAL CURRENCY.

Question 26: Problems such as the ones we have been discussing can lead people to feel emotions such as annoyance, frustration, stress and disappointment. Thinking back to the time when the problem on the trip to [INSERT DESTINATIONS MENTIONED IN Q7 OR Q30] occurred, were these negative emotional effects associated with it very low, low, neutral, high or very high?

[RECORD FOR PROBLEM MENTIONED IN Q7 OR Q30]

Very low	1
Low	2
Neutral	3
High	4
Very high	5
Don't know/Can't say	6

Question 27: (NOTE: DO NOT ASK IF NO ASSISTANCE AND NO COMPENSATION) And thinking about how you felt once the problem on the trip to [INSERT DESTINATION] had been dealt with, were the negative emotional effects associated with it very low, low, neutral, high or very high?

[RECORD FOR PROBLEM MENTIONED IN Q7 OR Q30]

Very low	1
Low	2
Neutral	3
High	4
Very high	5
Don't know/Can't say	6

QUESTIONS ABOUT OTHER TYPES OF TRAVEL ARRANGEMENTS

NOTE – ASK Q28 only if problems from Q6 are 0

Question 28: IN THE LAST 2 YEARS OR SO have you made any other type of **joint travelling arrangements**? –allow multicode

1) Yes, a traditional travel package GO TO Q29

2) Yes, a set of independent arrangements for a same trip GO TO Q29

3) No GO TO Q32

Question 29: And IN THE LAST 2 YEARS OR SO have you PERSONALLY experienced a problem with these other types of travel arrangements? – allow multicode

1) No - GO TO Q32
2) Yes, with a traditional travel package INTERVIEWER PROMPT 'how many?'
3) Yes, with a set of independent arrangements for a same trip INTERVIWER PROMPT 'how many?'
4) DK – GO TO Q32

INTERVIEWER NOTE: PLEASE BE SURE THAT THE NUMBER OF INCIDENCES RECORDED ARE 'SEPARATE' INCIDENTS AND ARE NOT PART OF THE SAME PROBLEM.

Question 30: We are going to ask you several questions about the most significant of these problems (IF MORE THAN ONE WAS MENTIONED). To make this easier could you give me the destination?

[RECORD LABEL AND USE THROUGHOUT SURVEY]

Question 31: Was that problem with a traditional package or another type of independent travel arrangement?

AT THE END OF THIS SET OF QUESTIONS THERE SHOULD BE AT MOST ONE PROBLEM IN RELATION TO WHICH DETAILED QUESTIONS ARE ASKED (INTERVIEWER TO RECORD IF PROBLEM WAS WITH, TRADITIONAL PACKAGE, OR WITH IDEPENDENT TRAVEL ARRANGEMENT)

ASK IN RELATION TO THIS PROBLEM THE FOLLOWING QUESTIONS:

IF TRADITIONAL PACKAGE: Q8, Q9, Q10, Q13, Q16, Q17 and Q18-Q27

IF SET OF INDEPENDENT ARRANGEMENTS: Q8 -Q27

FINAL BACKGROUND QUESTIONS

Thank you for answering those questions. Finally, just a few questions about yourself and your household to ensure we have a broad cross-section of people in our sample.

Question 32: Which of these best describes your current employment situation? Are you:

Self employed	1
Employed for wages, salary or payment in kind	2
Unemployed	3
Engaged in home duties	4
A student	5
Retired	6
Unable to work	7
Other [SPECIFY] ……	8
Don't know	9
Refused	10

Question 33: Before tax is taken out, which of the following ranges best describes your approximate household income, from all sources, over the last 12 months*? ADAPT to local currencies*

[READ OUT]

€1-€99pw (less than €5,200 p.a.)	1
€100-€299pw (less than €15,600 p.a.)	2
€300-€499pw (€15,600-€25,999 p.a.)	3
€500-€699pw (€26,000-€36,399 p.a.)	4
€700-€999pw (€36,400-€51,999)	5
€1,000-€1,499pw (€52,000-€77,999)	6
€1,500-€1,999pw (€78,000-€103,999)	7
€2,000pw or more (€104,000 or more)	8
Don't Know	9
Refused	9

Question 34: Finally, could I just have the postcode where you live?

Specify postcode [WRITE IN] ……	1
Don't know postcode [WRITE IN SUBURB, TOWN OR LOCALITY] ……	2

That's the end of the survey. I would like to thank you very much on behalf of the European Commission and Ipsos for your cooperation in this survey. We realise that we have asked you some difficult questions.

Annex 2 Personal characteristics and ex-post stratification

It is necessary to consider the personal characteristics of the respondents in the sample in order to assess whether the samples in each of the countries are representative of the general population and whether those who purchased dynamic packages differ from the general population. As shown below the sample, in this case, the sample does not seem to be fit the age and gender structure of the populations in the sample countries. Therefore we do ex-post stratification of the data. After presenting the personal characteristics of the sample and comparing these to the population, we present the methodology used for ex-post stratification.

A2.1 Personal characteristics

The survey contained questions related to the following personal characteristics:

- gender;
- age;
- employment status; and
- income

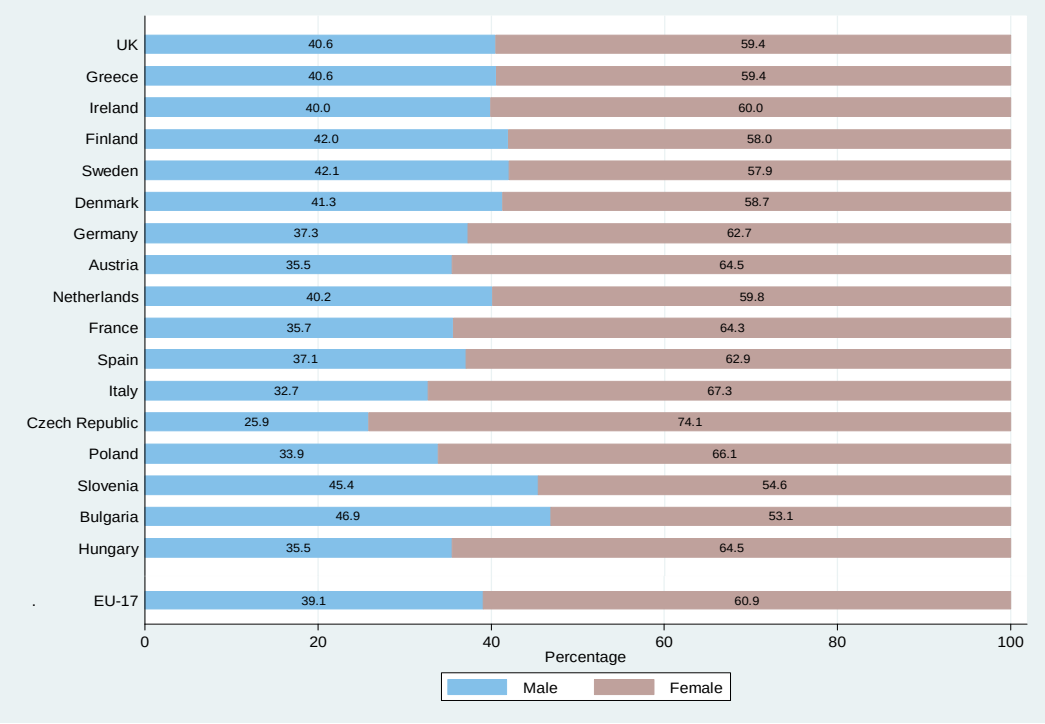
Age and gender was recorded both for interviewees who agreed to participate and had purchased dynamic packages and for those who had not purchased a dynamic package. However, being more sensitive information, respondents were only asked about their employment status and their income at the end of the interview. This implies that employment status and income only was recorded for those interviewees who had purchased a dynamic package and therefore completed the interview.

When assessing the representativeness of the sample obtained for the study, we need to consider whether the characteristics of the population match those of the entire sample of interviewees who agreed to participate. That is we need to consider the characteristics of both those who purchased and those who did not purchase a dynamic package. The reason is that the dynamic packages may be particularly appealing to some parts of the population and less appealing to other parts of the population. For instance, it may be that elderly people are less inclined to purchase dynamic packages because their travel pattern is different or because they are less likely to have access to the internet.

We are only able to assess the representativeness of the sample based on age and gender because these are the only characteristics which are recorded for the entire sample of interviewees who agreed to participate.

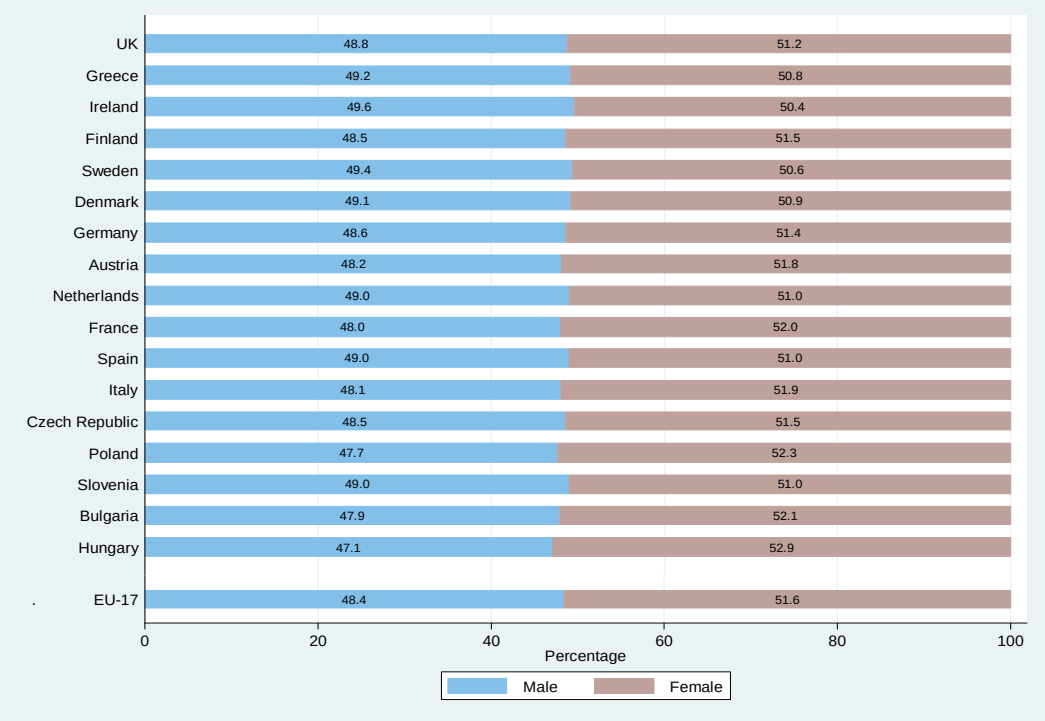
In all countries in the sample, there is an overweight of women in the total sample of interviewees who agreed to participate. There are only 35.5-46.9% male respondents in all countries except the Czech Republic (Figure 69). In the Czech Republic, only 25.9% of respondents were male. Therefore, the gender structure of the sample does not reflect the gender structure of the population where the share of males is between 47.1% and 49.6% in all countries (Figure 70).

Figure 69: Gender in total sample by country



Note: Recorded by the interviewer for each respondent. Based both on interviewees who had purchased a dynamic package and on interviewees who had not. EU-17 is a weighted average.
Source: London Economics based on data from Ipsos MORI.

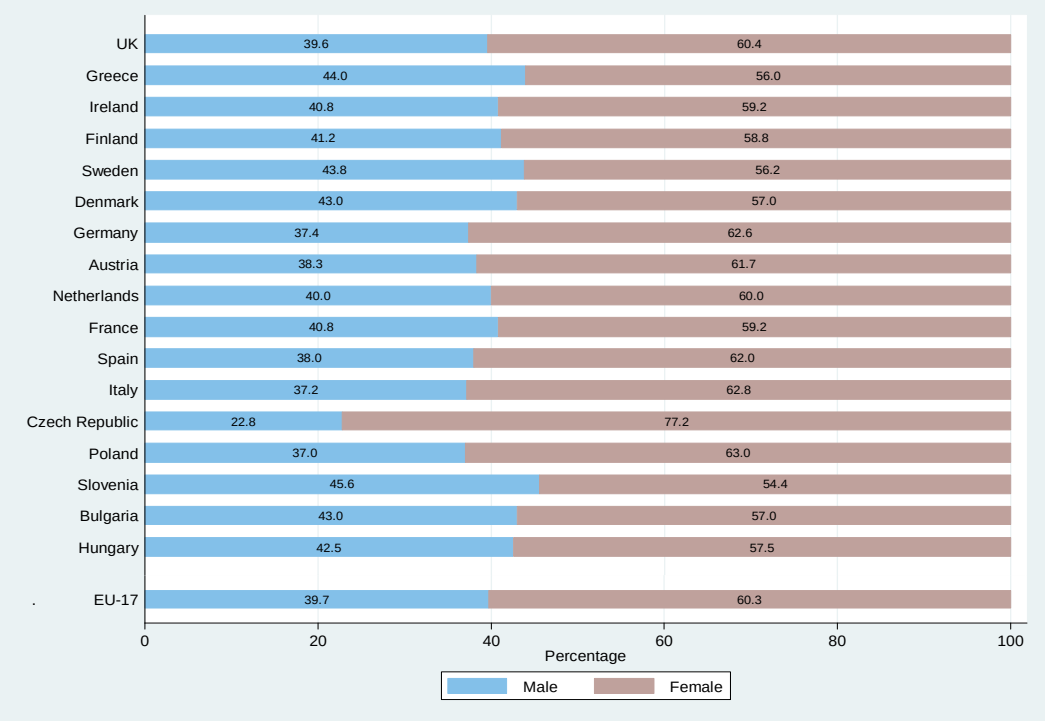
Figure 70: Gender in population by country



Note: EU-17 is a weighted average using population size as weights.
Source: London Economics based on data from Eurostat.

The share of females in the sample of interviewees who purchased a dynamic package is in the same order of magnitude as the share of females in the total sample of interviewees who agreed to participate (see Figure 69 and Figure 71).

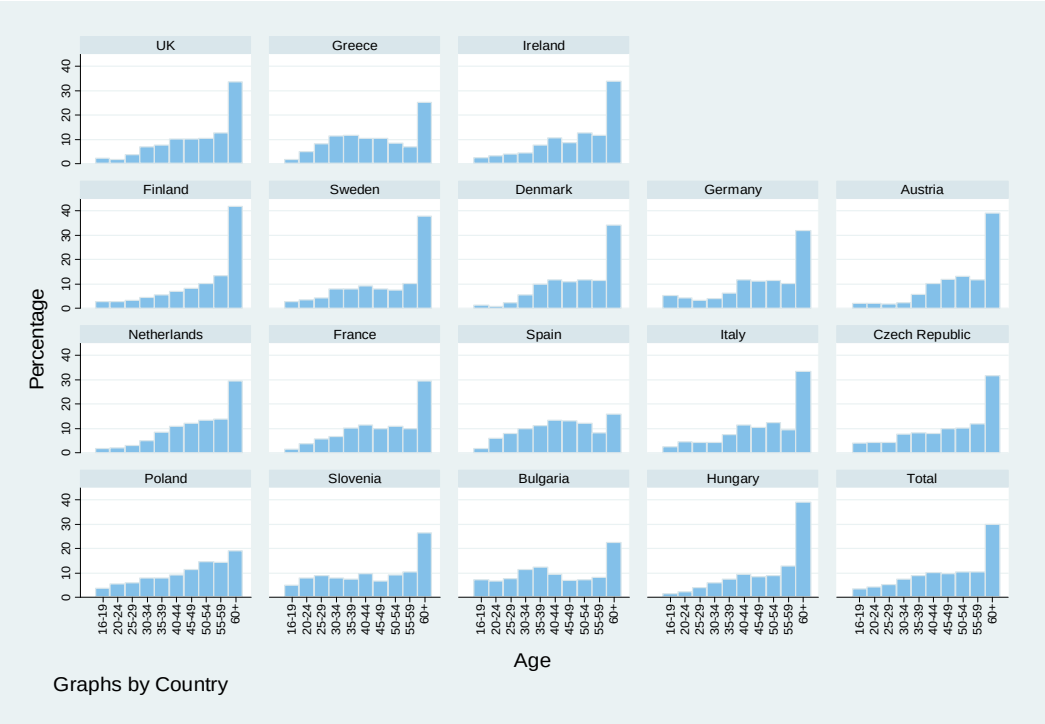
Figure 71: Gender in sample who purchased dynamic packages by country



Note: Recorded by the interviewer for each respondent. The total number of respondents for each country is given in Table 11. EU-17 is a simple average.
Source: London Economics based on data from Ipsos MORI.

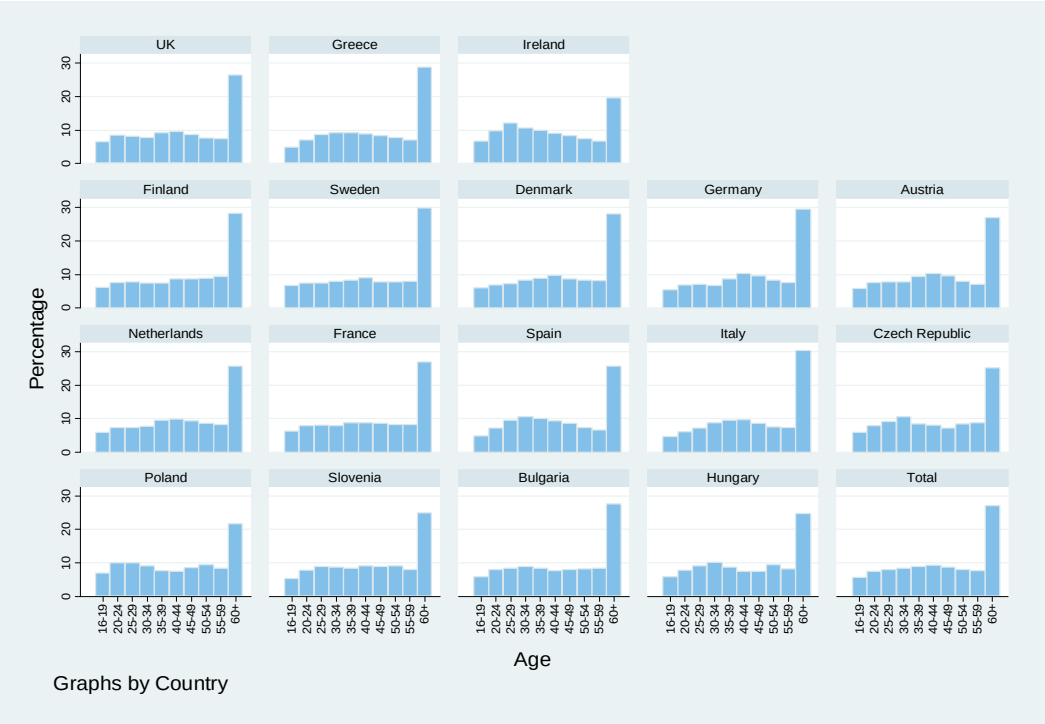
The age distributions for the interviewees who agreed to participate in each of the countries included in the survey are given in Figure 72. In most countries there seems to be relatively many respondents aged 60 or above. This seems less prevalent in Southern and Eastern European countries such as Greece, Spain, Poland and Hungary. It first it would seem that the population above 60 years old is overrepresented in these countries. However, a comparison with the age structure in the populations (Figure 73) reveals that this merely reflects the fact that a large share of the population is aged 60 years or above. In fact, it seems that the above 60 group is underrepresented in the sample in countries such as Greece, Bulgaria, Spain and Italy. Generally, in many countries the age structure of the sample does not fit the age structure of the population.

Figure 72: Age distribution for total sample



Note: Based on question 2 and on both the interviewees who had purchased and those who had not purchased a dynamic package. EU-17 is a weighted average with population size used as weights.
Source: London Economics based on data from Ipsos MORI.

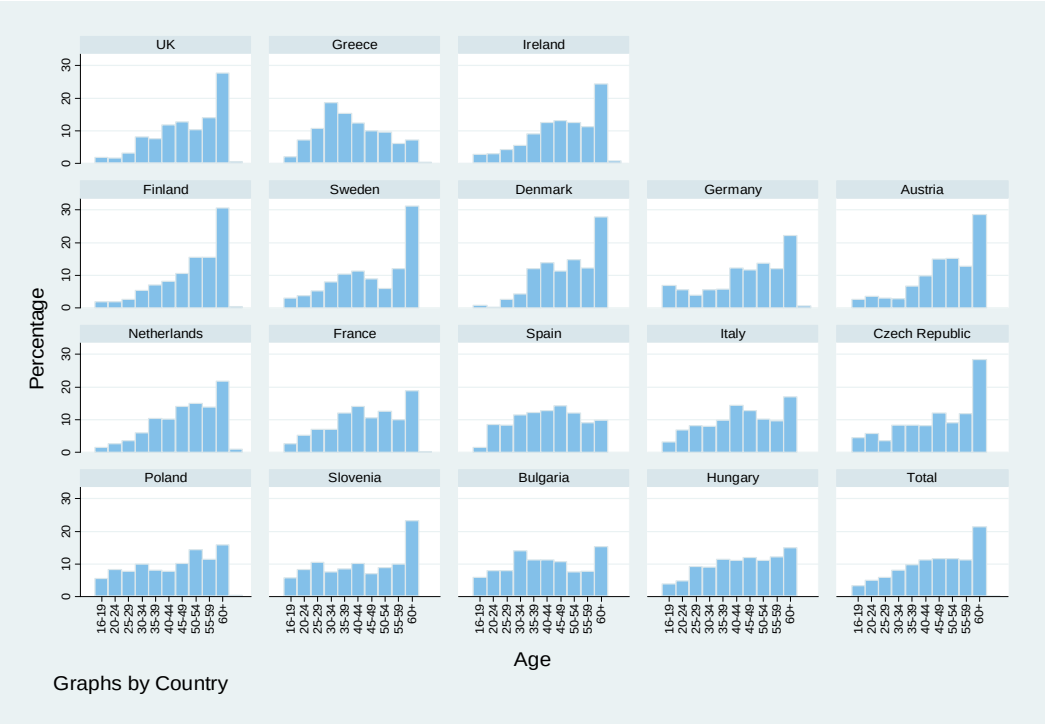
Figure 73: Age distribution for population



Note: EU-17 figure is a weighted average where population size is used as weights.
Source: London Economics based on data from Eurostat.

Among the interviewees who had purchased a dynamic package (Figure 74) there seems to be fewer people aged 60 or above than in the total sample. This is particularly pronounces in Greece and in Hungary. This indicates that those aged 60 or above are less like to purchase dynamic packages than others. If we ignore that the age structure of the total sample of interviewees who agreed to participate does not reflect the age structure of the population we risk ending up with biased results. To account for this we use ex-post stratification of the data using the methodology presented in the next subsection of this annex.

Figure 74: Age distribution for respondents who had purchased a dynamic package

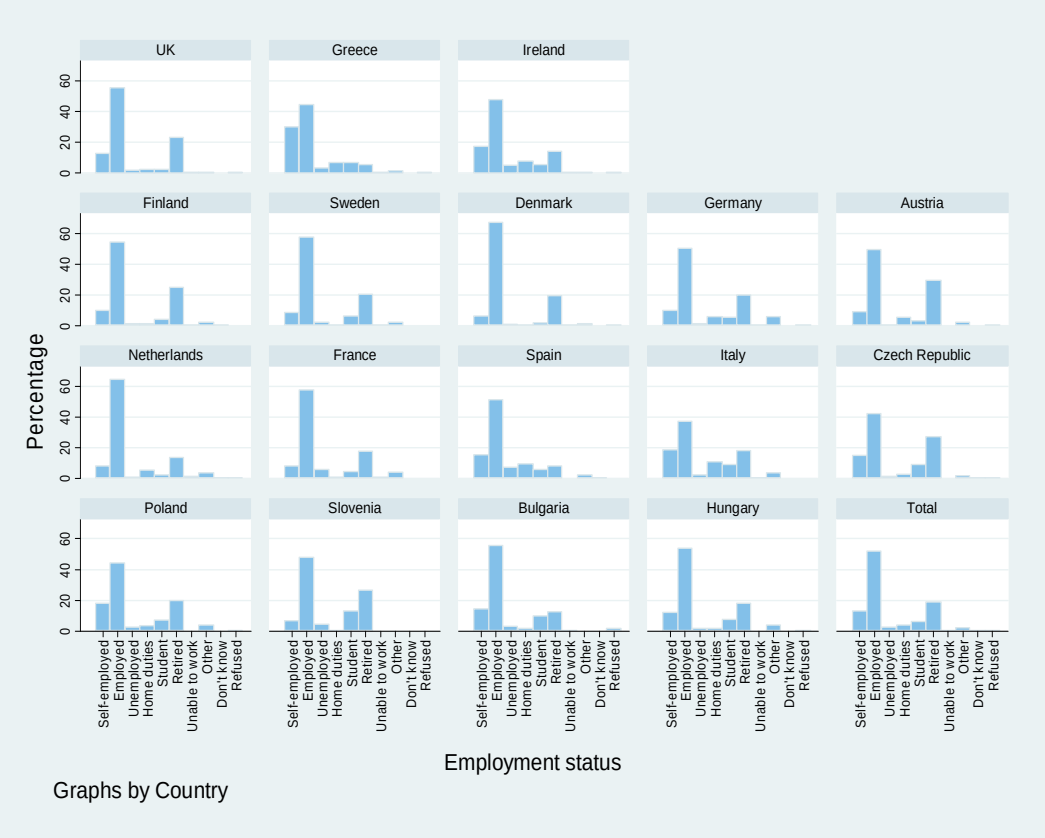


Note: Based on question 2 with the total number of respondents for each country according to Table 11.
Source: London Economics based on data from Ipsos MORI.

Before describing the ex-post stratification methodology, we present the remaining personal characteristics which are only recorded for those respondents who purchased dynamic packages and thus completed the questionnaire.

In all countries the majority of the respondents were employed (Figure 75). However in most countries there is also a large share of respondents who are retired. This is also reflected in the relatively large share of people aged 60 or above in the sample.

Figure 75: Employment status



Note: Based on question 32 with the total number of respondents for each country according to Table 11.
Source: London Economics based on data from Ipsos MORI.

Figure 76 and Figure 77 show the income of respondents in each of the survey countries. Notice that the income ranges provided for Hungary, Poland and Bulgaria have been adjusted to reflect that income levels in the countries in Eastern Europe generally are lower than in Western Europe. Notice that in the two Eastern European countries where no adjustment of the income ranges was done, the income distributions are skewed towards low income levels.

Figure 76: Income distribution for Euro countries in the sample

Note: Based on question 33 with the total number of respondents for each country according to Table 11.
Source: London Economics based on data from Ipsos MORI.

Figure 77: Income distribution for non-Euro countries in the sample

Note: Based on question 33 with the total number of respondents for each country according to Table 11.
Source: London Economics based on data from Ipsos MORI.

A2.2 Methodology for ex-post stratification

As discussed above there is a significant overweight of women in the sample and in many cases the sample does not seem to reflect the age structure of the population. For instance, women seem to be overrepresented in the sample and if the experiences of women differ from those of men this would imply that simple averages of the results would be biased towards the experiences of women. Therefore, it may be appropriate to adjust for this bias by putting more weight on the experiences of men in the sample than on the experiences of women in the sample.

To ensure that our results are not biased by non-random sampling, we do ex-post stratification using frequency weights to adjust our data. In doing so, we assign weights to the observations in the sample, such that more weight is put on observations which are underrepresented in the sample.

The first step in applying frequency weights is to determine which personal characteristics we wish to adjust the data to. In our case we chose to adjust for the age and gender structure in each survey country.

We then cross tabulate age and gender in each country in the total sample of interviewees who agreed to participate and in the population. This gives us 340 groups (17 countries x 10 age groups x 2 genders). For instance, Austrian females aged 16-19 years and UK males aged 60 or above.

The cross tabulations serve as the basis for weighting the observations using frequency weights. Frequency weights are defined as the number of people in the population each observation represents. In our case, this implies that:

Box A1: Frequency weights

Weight **=**

Number of people in same group in population /

Number of people in same group in sample of interviewees who agreed to participate in the survey

This effectively means that each of the observations in a group is duplicated the same number of times until the size of the group is equal to the size of the group in the population. In doing this, we adjust characteristics of the sample to that of the population. All figures and tables are weighted in this way with the aim of making conclusions that are applicable to the population and not only to the sample at hand.

Notice that by using frequency weighting when calculating the EU-17 average we are also weighting the results of the different countries by the population size. The reason is that when we apply the weights observations in a country are duplicated such that the sum of the observations across all groups within a country equals the population size.

Notice also that the age and gender was only recorded for those interviewees who did not close the interview because they said that they did not travel. This implies that we do not know the age and gender structure of the total sample of people agreeing to participate. Therefore, we need to assume that the age and gender structure of the people who said that they did not travel is the same as the age and gender structure of those who did not say that they do not travel.

We acknowledge that this may not be completely appropriate since the oldest citizens may travel less than younger citizens. However, the problem may not be so big because some people who do not travel may not have said so initially because respondents were not specifically asked this question. Therefore, we may have recorded the age of at least some people who do not travel.

Further, notice that while we are assuming that the age and gender structure of those who said that they do not travel is identical to the age and gender structure of those who did not conclude the interview for this reason, we are **not** assuming that the age structure of those who purchase dynamic packages is identical to that of the people who travel but do not purchase dynamic packages. This is an important distinction to make because the age structure of users of dynamic packages may be more skewed towards low age groups than the age structure of people who travel more generally. This might be the case if dynamic packaging is more dependent on internet usage than travelling more broadly.

Annex 3 Excluded respondents

It seems that some respondents have misunderstood the definition we have used for dynamic packages although examples were provided of what is considered a dynamic package and what is not.

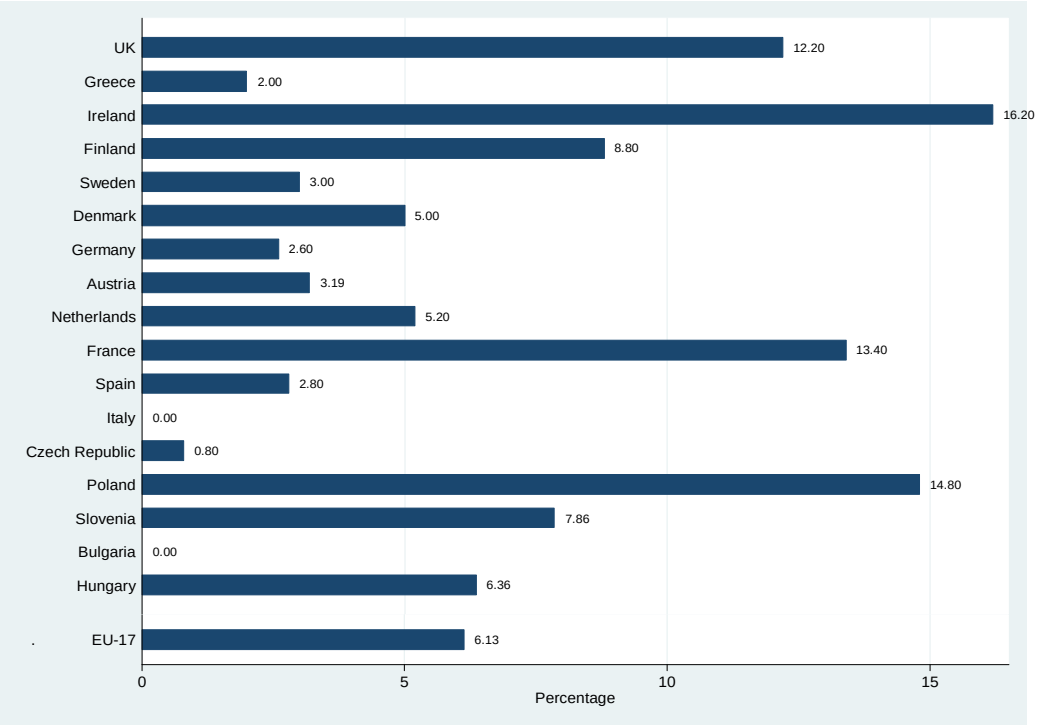
Ideally we would like to exclude all respondents who have misunderstood the concept of dynamic packages but it is very difficult to verify who have misunderstood the concept and who have not. We risk excluding too many observations and thus reducing the power of the survey if we are not careful. Therefore, in the interest of not removing too many respondents, we only exclude respondents where we can be relatively sure that they have misunderstood the concept. We find that this is only the case for respondents who have indicate that their 'package' includes only one component.

Figure 78 shows the percentage of the respondents who had purchased dynamic packages but said that the dynamic 'package' contained only one component[41]. On average in EU-17, 6.13% of respondents said that the package had contained only one component. However, there are large cross country differences. For instance, in the UK, Ireland, France and Poland more than 10% of the respondents said that the 'package' contained only one component whereas in Italy and Bulgaria none of the respondents said that the 'package' contained only one component.

Table 10 shows the number of completed questionnaires in total. The questionnaire was only completed by respondents who said that they had purchased a dynamic package. Further, the table shows the number of observations in each country excluded because the 'package' contained only one component. Finally, the figure shows the number of valid respondents. That is the number of respondents after we have excluded those respondents who said that the 'package' only contained one component.

[41] Respondents were asked what was included in the package and responses were grouped by the interviewer in: Flights; other transport; accommodation; car rental; transfers; attractions, shows and excursions; meals or meals and drinks; sports; kid's programmes; cruise; other (please specify); Don't know (for Hungary only). We count each of these as one component.

Figure 78: Percentage of respondents who indicated that the "package" had only contained one element



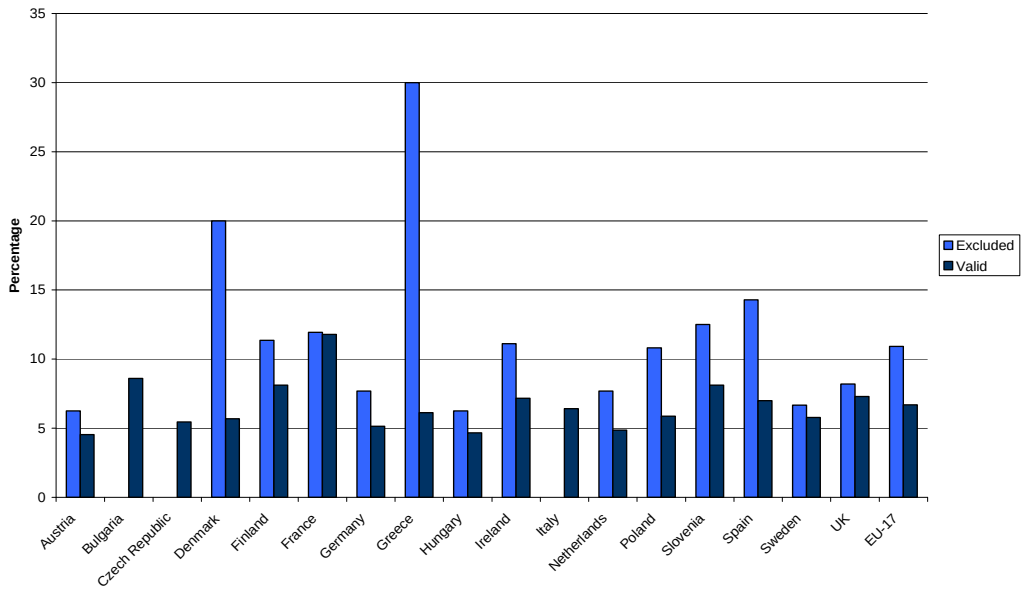
Note: This is based on Question 13 of the questionnaire and on the total number of respondents given in Table 10. Question was referred to most recent occasion using a dynamic package unless respondents had experienced a problem in which case the respondent was asked to refer to the most significant occasion on which he/she had experienced a problem. The figure for EU-17 is a simple average across the 17 countries.
Source: London Economics based on data from Ipsos MORI.

Table 10: Number of respondents including and excluding those who said that the 'package' contained only one component			
Column 1	**Column 2**	**Column 3**	**Column 4**
Country	**Total competed questionnaires**	**Number excluded because package contained only one component**	**Number of valid respondents**
Austria	501	16	485
Bulgaria	500	0	500
Czech Republic	500	4	496
Denmark	500	25	475
Finland	500	44	456
France	500	67	433
Germany	500	13	487
Greece	500	10	490
Hungary	503	32	471
Ireland	500	81	419
Italy	500	0	500
Netherlands	500	26	474
Poland	500	74	426
Slovenia	509	40	469
Spain	500	14	486
Sweden	500	15	485
UK	500	61	439
EU-17	**8513**	**522**	**7991**

Note: Column 4 = Column 2 – Column 3.

It may be that the likelihood that something went wrong on the holiday differed for 'packages' consisting of one component and for packages consisting of more components. Figure 79 shows that in all countries where respondents were excluded except for the Czech Republic the percentage of problematic cases is higher among the excluded observations than among the valid observations. This is most pronounced in Denmark and Greece. Therefore, by excluding these observations we are likely to reduce the incidence of problems in all countries except for the Czech Republic, Italy and Bulgaria.

Figure 79: Percentage of problematic 'packages' among excluded and valid observations



Note: This is based on question 13 and question 6 of the questionnaire and on the number of respondents given in Table 10. Question 13 was referred to most recent occasion using a dynamic package unless respondents had experienced a problem in which case the respondent was asked to refer to the most significant occasion on which he/she had experienced a problem. The figure for EU-17 is a simple average across the 17 countries.
Source: London Economics based on data from Ipsos MORI.

Annex 4 Number of completed valid responses to the consumer survey

This annex includes a summary of the number of valid respondents to specific questions. We give the number of respondents after having excluded respondents who are assessed to have misunderstood the concept of dynamic packaging.

Table 11: Number of respondents with and without problems related to dynamic packages			
Country	**Competed questionnaires**	**Number of respondents who had experienced problems**	**Number of respondents with no problems with dynamic packages**
Austria	485	22	463
Bulgaria	500	43	457
Czech Republic	496	27	469
Denmark	475	27	448
Finland	456	37	419
France	433	51	382
Germany	487	25	462
Greece	490	60	430
Hungary	471	22	449
Ireland	419	30	389
Italy	500	32	468
Netherlands	474	23	451
Poland	426	25	401
Slovenia	469	38	431
Spain	486	34	452
Sweden	485	28	457
UK	439	62	377
EU-17	**7991**	**586**	7405

Table 12: Number of respondents to specific questions for dynamic packages						
Country	**Website**			**Received compensation**		**Received assistance or compen-sation**
	Non-problematic	Problematic	Total	Cash or voucher	Total	
Austria	119	4	123	1	2	13
Bulgaria	104	7	111	1	4	43
Czech Republic	149	9	158	7	9	17
Denmark	299	19	318	4	7	16
Finland	234	20	254	5	5	23
France	166	21	187	5	15	35
Germany	141	12	153	1	2	12
Greece	176	24	200	3	6	25
Hungary	149	9	158	1	3	18
Ireland	237	21	258	1	3	9
Italy	147	9	156	2	2	17
Netherlands	226	12	238	4	8	15
Poland	164	10	174	2	5	13
Slovenia	114	8	122	6	7	8
Spain	159	10	169	7	8	19
Sweden	280	11	291	7	11	19
UK	203	35	238	10	14	37
EU-17	**3067**	**241**	**3308**	**67**	**111**	**339**

Table 13: Number of respondents to specific questions for traditional packages and independent travel arrangements

Country	Website only applicable to independent	Received compensation				Received assistance or compensation	
		Traditional		Independent		Traditional	Independent
		Total	Cash or voucher	Total	Cash or voucher		
Austria	1	4	0	0	N/A	5	1
Bulgaria	N/A	1	0	N/A	N/A	4	N/A
Czech Republic	0	1	1	0	N/A	2	0
Denmark	4	1	1	1	0	2	4
Finland	4	1	0	3	2	1	3
France	1	1	0	0	N/A	3	1
Germany	0	2	2	1	1	4	1
Greece	3	0	N/A	0	N/A	2	1
Hungary	N/A	2	0	N/A	N/A	2	N/A
Ireland	1	0	N/A	0	N/A	0	0
Italy	1	2	1	0	N/A	3	2
Netherlands	2	1	1	2	1	2	2
Poland	4	5	3	1	0	6	1
Slovenia	1	1	1	1	1	2	1
Spain	1	1	1	1	0	1	1
Sweden	2	2	1	3	1	3	3
UK	3	1	0	0	N/A	1	1
EU-17	**28**	**26**	**16**	**13**	**6**	**43**	**22**

Annex 5 Incidence

A5.1 Share of population having used dynamic packages

To assess the prevalence of dynamic packages in the populations we calculate what shares of the population in each of the sample countries has used dynamic packages within the last 2 years. In order to do this it is necessary to understand the steps of the interview process.

The purpose of the questionnaire was to obtain information about the incidence of problems with dynamic packages and the size of the costs associated with the problems. Therefore, the individuals surveyed needed to have experiences with dynamic packages and be old enough to answer the survey. Consequently, individuals who agreed to participate in the survey qualified to complete the survey if:

- they were at least 16 years old; and
- had purchased a dynamic package within the last 2 years.

The consumer survey aimed to get 500 completed surveys for each of the survey countries and the interview process included the following steps:

1. Interviews made calls;
2. Some individuals agreed to participate;
3. After the initial introduction some interviewees said that they do not travel and for these people the interview ended;
4. The interviewer recorded the age of the interviewee. Interviews with individuals aged 15 or less ended;
5. Interviewees were asked whether they had purchased a dynamic package and if they had not the interview ended; and
6. The interview started from individuals who i) had agreed to participate; ii) travel; iii) were more than 15 years old; and iv) had purchased a dynamic package. The questionnaire for most but not all of the respondents from step 4 were completed.

The survey company recorded the number of interviewees in each of these steps. That is i) the number of calls made; ii) the number of individuals who agreed to participate; iii) the number who said they did not travel; iv) the number who travelled and were aged 15 or less; v) the number who did not purchase dynamic packages; and vi) the number of completed questionnaires.

We should stress that participants who travel do not necessarily purchase dynamic packages. Rather, people who have bought dynamic packages are a sub sample of those who travel who in turn are a sub sample of those who agreed to participate.

The first step towards estimating the share of the population who had used dynamic packages is to estimate the total number of interviewees aged 15 or above who agreed to participate.

The survey data does not contain this information because some interviews with individuals who agreed to participate concluded before the age was recorded. We therefore need to adjust the total number of people who agreed to participate to take into account that some of these people were aged 15 or below. To do this we need to assume that the share of people aged 15 or below is approximately the same among households that travel and households that do not. We use the methodology summarized below to estimate the number of interviewees who agreed to participate **and** who were more than 15 years old:

Box A5.1: Participating interviewees above 15

Participating interviewees above 15 =

Participants in total sample x (1 – share of those travelling aged 15 or below)

where

Share of those travelling aged 15 or below =

Participants travelling aged 15 or below /

(Participants in total sample – Participants not travelling)

The survey company recorded the total number of people who agreed to participate, as well as the number of participants who said that they did not travel, and the number of participants who did not conclude the interview by saying that they do not travel but who were excluded from completing the interview because they were aged 15 or below. Therefore, using the methodology above it is straight forward to estimate the number of interviewees who agreed to participate **and** who where more than 15 years old (estimates are provided in Table 14).

Table 14: Participating interviewees above 15						
Column 1	Column 2	Column 3	Column 4 = column 2 – column 3	Column 5	Column 6 = column 5 / column 4	Column 7 = column 2 x (1-column 6)
Country	Total sample*	Sample not travelling*	Sample travelling	Travelling + 15 or below*	Share of travelling aged 15 or below	*Interviewees above 15*
Austria	2793	1285	1508	5	0.0033	*2784*
Bulgaria	7812	1081	6731	455	0.0676	*7284*
Czech	4412	2860	1552	11	0.0071	*4381*
Denmark	2246	981	1265	10	0.0079	*2228*
Finland	2897	1805	1092	6	0.0055	*2881*
France	2633	749	1884	13	0.0069	*2615*
Germany	2844	1425	1419	8	0.0056	*2828*
Greece	2988	932	2056	29	0.0141	*2946*
Hungary	4733	2655	2078	0	0.0000	*4733*
Ireland	1070	222	848	7	0.0083	*1061*
Italy	1988	130	1858	37	0.0199	*1948*
Netherlands	2494	1134	1360	11	0.0081	*2474*
Poland	2856	1403	1453	3	0.0021	*2850*
Slovenia	1438	600	838	54	0.0644	*1345*
Spain	2850	1784	1066	1	0.0009	*2847*
Sweden	1985	670	1315	4	0.0030	*1979*
UK	2740	1515	1225	6	0.0049	*2727*
EU-17	**50779**	**21231**	**29548**	**660**		

Note:* Variable provided by survey company.

The second step towards estimating the share of the population who have used dynamic packages is to estimate the number of interviewees above 15 years who had purchased a dynamic package and had not misunderstood the concept.

Notice that the number of people who completed the interview is not identical to the number of people who said that they had bought a dynamic package. The reason is that some interviews with people who said they had purchased a dynamic package were concluded before the questionnaire was completed. When estimating the incidence of purchase among households, we would underestimate it if we based the estimate on the number of completed questionnaires in each country. Therefore, we use the following methodology to estimate the number of people aged more than 15 who had purchased a dynamic package:

Box A5.2: Interviewees above 15 who purchased dynamic packages

Interviewees above 15 who purchased dynamic package =

Participants travelling x (1 – share of those travelling aged 15 or below) –

Participants above 15 who did not purchase dynamic packages – excluded observations

Using this methodology we adjust the number of people who travel[42] to take in to account that some of these people were aged 15 or below and therefore should not be considered for the sample. Further, from the number of travelling participants aged more than 15 we subtract the number of people who said that they had not purchased a dynamic package and the number of observations we exclude on the grounds that the respondents had misunderstood the definition of dynamic packages provided.

Table 15 provides our estimates of the number of participants aged more than 15 years who purchased a dynamic package.

[42] I.e. the number of people who did not conclude the interview by saying that they do not travel.

Table 15: Participants above 15 who bought dynamic packages					
Column 1	Column 2	Column 3	Column 4	Column 5	Column 6 = column 2 x (1-column 3) - column 4 – column 5
Country	Sample travelling	Share of travelling aged 15 or below	Participants above 15 who did not buy DP*	Excluded observations	*Participants above 15 who did buy DP*
Austria	1508	0.0033	1000	16	*487*
Bulgaria	6731	0.0676	5776	0	*500*
Czech	1552	0.0071	1040	4	*497*
Denmark	1265	0.0079	755	25	*475*
Finland	1092	0.0055	585	44	*457*
France	1884	0.0069	1338	67	*466*
Germany	1419	0.0056	866	13	*532*
Greece	2056	0.0141	1508	10	*509*
Hungary	2078	0.0000	1496	32	*550*
Ireland	848	0.0083	341	81	*419*
Italy	1858	0.0199	1314	0	*507*
Netherlands	1360	0.0081	842	26	*481*
Poland	1453	0.0021	872	74	*504*
Slovenia	838	0.0644	275	40	*469*
Spain	1066	0.0009	551	14	*500*
Sweden	1315	0.0030	705	15	*591*
UK	1225	0.0049	715	61	*443*
EU-17	**29548**			**522**	

Note:* Variable provided by survey company.

The next step is to take into account that the age and gender structure of the population does not exactly match that of the sample. We use ex-post stratification to adjust the sample characteristics to the characteristics of the population.

Notice that the age and gender was only recorded for those interviewees who did not close the interview because they said that they did not travel. This implies that we do not know the age and gender structure of the total sample of people agreeing to participate. Therefore, we need to assume that the age and gender structure of the people who said that they did not travel is the same as the age and gender structure

of the people who did not close the interview by saying that they do not travel. We acknowledge that this may not be completely appropriate since the oldest citizens may travel less than younger citizens. However, since interviewees were not specifically asked whether they travel we may have recorded the age of some of the people who, in fact, do travel and therefore the problem may be relatively small.

For each country we split the estimated number of participating interviewees aged above 15 into 20 groups (2 genders x 10 age groups) using estimates of the percentage of respondents in each of the groups in the sample of interviewees for whom age and gender was recorded.

Similarly we split the estimated number of interviewees above 15 who have purchased a dynamic package into the 20 age and gender groups using estimates of the percentage of completed and valid respondents in each group[43].

Now for each of the 20 groups in each country we estimate the share of households which had purchased dynamic packages. It should be emphasized that the strategy for selecting the sample implied that each household would only be contacted once. Therefore we can use the following methodology to estimate incidence of purchase among households:

Box A5.3: Incidence of purchase among households

Incidence of purchase among households =

Interviewees above 15 who purchased dynamic package / Participating interviewees above 15

Having calculated the share of households who had used dynamic packages in each age-gender group we calculate the incidence of purchase among households in each country as a weighted average of the estimated shares in the 20 age-gender groups. As weights we use the size of the population in each of the 20 age-gender groups.

To calculate the incidence of purchase among households for EU-17 we take a weighted average of the 17 country estimates, where we use total population size of the countries as weights.

In Table 16 we show the estimates of the share of the population above 15 who purchase dynamic packages for each of the survey countries.

[43] Notice that the number of completed and valid responses in some cases is smaller than the number of people who said that they had purchased a dynamic package – either because the individual had misunderstood the concept of because the interview had to be close before all questions had been asked. We assume that this is random across all age and gender groups.

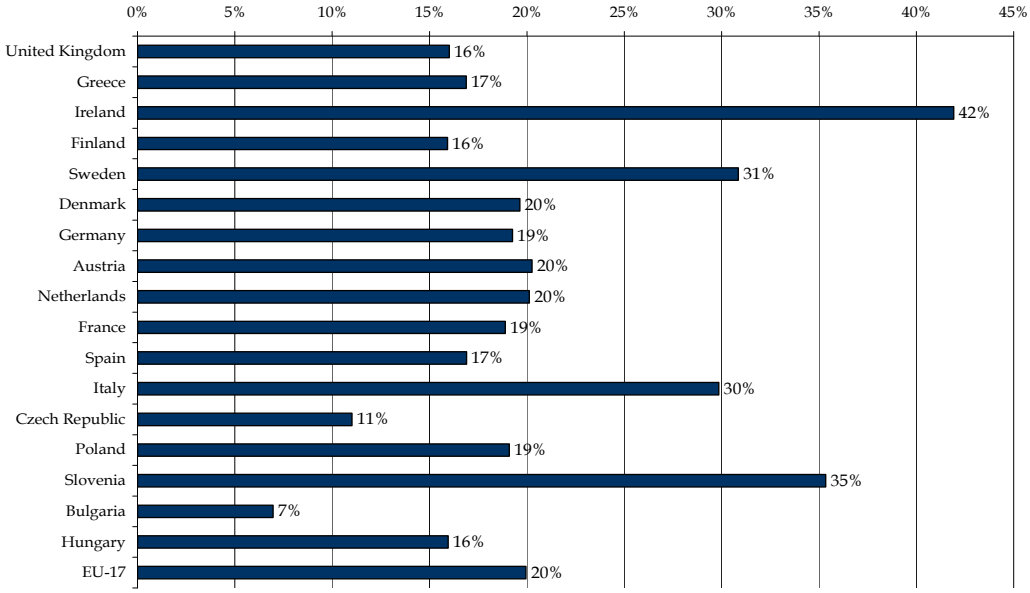
Table 16: Incidence of purchase among households	
Country	*Incidence of purchase in population above 15*
Austria	***20%***
Bulgaria	***7%***
Czech Republic	***11%***
Denmark	***20%***
Finland	***16%***
France	***19%***
Germany	***19%***
Greece	***17%***
Hungary	***16%***
Ireland	***42%***
Italy	***30%***
Netherlands	***20%***
Poland	***19%***
Slovenia	***35%***
Spain	***17%***
Sweden	***31%***
UK	***16%***
EU-17	***20%***

Note: EU-17 is calculated as a weighted average of the country estimates. As weights we have used the population size of the 17 countries.

There are large cross-country differences in the share of households agreeing to participate who had purchased dynamic packages within the last 2 years (Figure 80). On average in EU-17, we estimate that 20% of the households have purchased dynamic packages over the last 2 years.

More than 30% of the households are estimated to have purchased at least one dynamic package within the last 2 years in Ireland, Sweden, Slovenia and Italy. In most other countries, 16-20% of the households are estimated to have purchased a dynamic package within the last 2 years. There seems to be a tendency that the incidence of purchase is lower among households in the New Member States had purchased dynamic packages. However, Slovenia is a clear exception from this tendency.

Figure 80: Incidence of purchase of dynamic packages for households



Note: EU-17 is calculated as a weighted average of the 17 countries. Population size is used as weights.
Source: London Economics based on survey data from Ipsos MORI and Eurostat data.

Given the *incidence rates for purchase* of dynamic packages, we use the following methodology to calculate the *incidence of use* in the population of each of the survey countries.

Box A5.4: Incidence of use in population

Incidence of use in population =

Incidence of purchase among households / Average household size x Average number of people travelling as part of the package

The incidence of use in the population can be interpreted as the share of the population who have had experiences with dynamic packages within the last 2 years.

Estimates of the average household size in each country are obtained from Eurostat and are from 2007. The only exceptions are Denmark where the most recent Eurostat data is from 2006 and Ireland and Sweden for which no Eurostat data is available.

For Ireland we use estimates of average household size from Central Statistics Office Ireland from 2006 and for Sweden we use data from Census 90 from Statistiska Centralbyrån.

It should be noted that we are assuming that the sample of households is representative of all households. This is a necessary assumption when we apply the estimates of average household size based on the entire population to the sample.

Estimates of the average number of people travelling as part of the package are obtained from the survey. In question 9 respondents were asked how many people travelled or were expected to travel as part of the package. If the respondents chose 5 people or more we assigned the value 5. This implies that we risk underestimating the average number of people travelling as part of the package and that we therefore are likely to slightly underestimate the incidence of use in the population.

Table 17 and Figure 81 show the calculated incidence rates. It is worth noting that the average household size is lower than the average number of people travelling together. As a result the estimates in Figure 81 are larger than those in Figure 80.

The figures for EU-17 are calculated as weighted averages of the 17 country estimates using the total population size of the countries as weights.

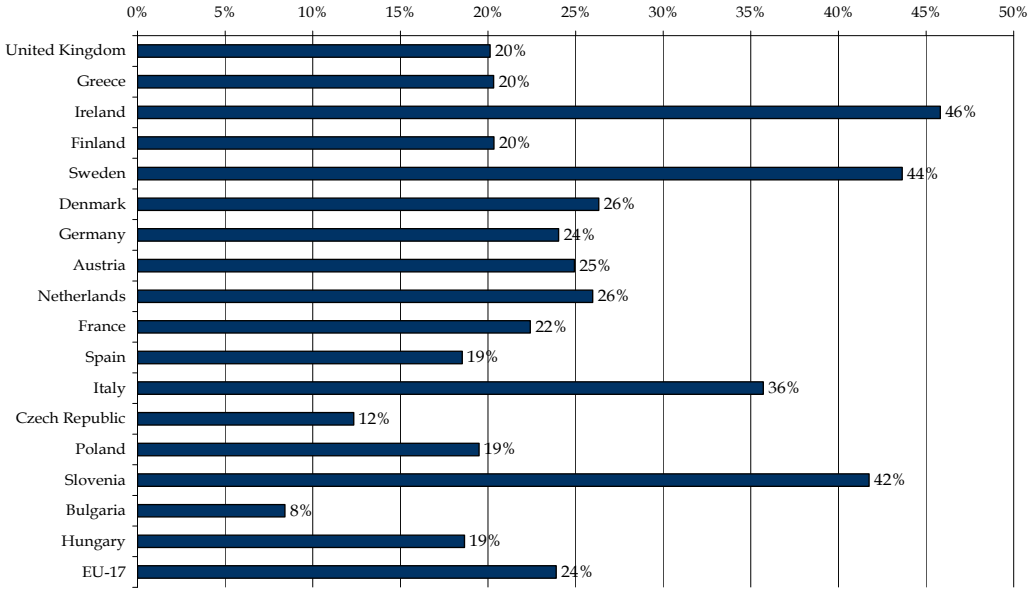
We estimate that, in EU-17, 24% of the population have used dynamic packages within the last 2 years. Again there are large cross-country differences and the pattern of cross-country differences is very similar to those described above for the incidence of purchase. For instance, incidence rates are very high in Italy, Ireland, Slovenia and Sweden which also had high incidence rates for purchase.

Table 17: Incidence of use in population				
Column 1	**Column 2**	**Column 3**	**Column 4**	**Column 5 = column 2 / column3 x column 4**
Country	**Incidence of purchase in population above 15**	**Average household size**	**Average number of people travelling as part of the package**	***Incidence of use within the last 2 years in the population***
Austria	20%	2.3	2.83	*25%*
Bulgaria	7%	2.5	3.02	*8%*
Czech Republic	11%	2.5	2.80	*12%*
Denmark	20%	2.2	2.95	*26%*
Finland	16%	2.2	2.81	*20%*
France	19%	2.3	2.73	*22%*
Germany	19%	2.1	2.62	*24%*
Greece	17%	2.5	3.01	*20%*
Hungary	16%	2.6	3.04	*19%*
Ireland	42%	2.8	3.06	*46%*
Italy	30%	2.5	2.99	*36%*
Netherlands	20%	2.2	2.84	*26%*
Poland	19%	2.9	2.96	*19%*
Slovenia	35%	2.7	3.19	*42%*
Spain	17%	2.8	3.07	*19%*
Sweden	31%	2.1	2.97	*44%*
UK	16%	2.3	2.89	*20%*
EU-17	**20%**			***24%***

Note: Average household size is from 2007 in most countries but in Denmark and Ireland figures are from 2006 and for Sweden the figure is from 1990. Average household size for EU-17 is a weighted average of the household sizes in the survey countries. Each is weighted by the population (data on population is from Eurostat).

Source: London Economics based on data from the survey from Ipsos MORI and data on average household size from Eurostat, Central Statistics Office Ireland and Statistiska Centralbyrån in Sweden.

Figure 81: Incidence of use of dynamic packages in the population within the last 2 years



Source: London Economics based on survey data from Ipsos MORI and data on average household sizes from Eurostat, Central Statistics Office Ireland and Statistiska Centralbyrån.

A5.2 Share of population who have experienced problems

This section describes the methodology adopted to estimate the incidence of problems with dynamic packages in the population.

Before we describe the methodology, notice that in this section, 'respondent' refers to those interviewees who were at least 16 years old, had purchased a dynamic package[44], and had completed the survey.

When calculating the share of the population who had experienced problems with dynamic packages within the last 2 years we need to take into account that in most countries we find that more people travel together on packages which cause problems than on dynamic packages in general.

[44] Does not include respondents who were excluded on the grounds of having misunderstood the definition of dynamic packages.

With this in mind we use the following methodology to estimate the share of the population who have been affected by problems with dynamic packages within the last 2 years.

Box A5.5: Incidence of problems with dynamic packages in population

Incidence of problems with dynamic packages in population =

Incidence of problems among respondents x Incidence of use of dynamic packages in the population x Correction factor for number of people travelling together

where

Correction factor for the number of people travelling together =

Average number of people travelling together when a problem occurred /

Average number of people travelling together in whole sample

Notice that we implicitly assume that if people have experienced problems with more than one dynamic package the same people were affected by the problem in all cases. This of course is a rather restrictive assumption and it may not be appropriate. However, given the level of detail which could meaningfully be provided in the survey this is a necessary assumption to make.

Table 18 shows the calculated incidence of problems with dynamic packages in the population. The EU-17 figure is calculated as a weighted average of the 17 estimates for the survey countries. The estimates are weighted by the total population. It should be noted that people who experienced problems within the last 2 years on average experienced slightly more than 1 problem.

Table 18: Incidence of problems with dynamic packages in population

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6 = column 4 / column 5	Column 7 = column 2 x column 3 x column 6
Country	**Incidence of use within the last 2 years in the population**	**Incidence of problems among respondents**	**Average number of people travelling as part of package**		**Correction factor**	***Incidence of problems with dynamic packages in population***
			Problematic	**Total**		
Austria	25%	5.93%	2.68	2.83	0.95	1.40%
Bulgaria	8%	8.21%	3.13	3.02	1.04	0.72%
Czech Republic	12%	5.16%	2.77	2.80	0.99	0.63%
Denmark	26%	5.36%	2.71	2.95	0.92	1.30%
Finland	20%	8.28%	3.31	2.81	1.18	1.98%
France	22%	12.97%	2.90	2.73	1.06	3.09%
Germany	24%	5.58%	2.74	2.62	1.05	1.40%
Greece	20%	12.16%	3.04	3.01	1.01	2.50%
Hungary	19%	5.11%	3.06	3.04	1.01	0.96%
Ireland	46%	6.67%	2.24	3.06	0.94	3.24%
Italy	36%	6.41%	2.98	2.99	1.00	2.28%
Netherlands	26%	4.61%	2.65	2.84	0.93	1.12%
Poland	19%	5.62%	2.88	2.96	0.97	1.07%
Slovenia	42%	8.40%	3.47	3.19	1.09	3.82%
Spain	19%	6.76%	2.79	3.07	0.91	1.14%
Sweden	44%	5.30%	2.79	2.97	0.94	2.17%
UK	20%	15.66%	2.84	2.89	0.98	3.10%
EU-17	**24%**					**1.97%**

Note: When calculating the number of people travelling we assign the value 5 to respondents who said that 5 or more people travelled together. EU-17 is calculated as a weighted average of the country es6timates using population size as weights. Notice that column 3, 4 and 5 are calculated from survey responses. When calculating these averages we have used the ex-post stratification method described in Annex 2.

Source: London Economics based on survey data from Ipsos MORI and data on average household sizes from Eurostat, Central Statistics Office Ireland and Statistiska Centralbyrån.

Annex 6 Incidence of costs associated with problems

Table 19: Percentage of respondents with problems who experienced the different costs

	Purchasing replacement or additional items or services							Illness or injury suffered by using the services	Following up or trying to resolve the problem(s)				Other 'out-of-pocket' costs
	Travel outward or inward	Transfer	Day trips	Accom-odation	Other parts of 'inclusive' package	Car rental	Other items		Commu-nication	Travel or accom-odation	Legal	Other expert advice	
AT	39%	64%	42%	2%	48%	2%	12%	0%	38%	30%	0%	0%	2%
BG	2%	2%	0%	0%	0%	0%	0%	2%	3%	5%	3%	0%	3%
CZ	19%	13%	9%	14%	6%	6%	19%	2%	16%	8%	0%	0%	6%
DK	12%	3%	0%	6%	0%	0%	3%	0%	26%	21%	0%	0%	15%
FI	10%	12%	2%	22%	7%	4%	0%	2%	35%	8%	0%	0%	16%
FR	21%	22%	9%	14%	17%	13%	14%	2%	52%	10%	0%	1%	5%
DE	60%	29%	19%	17%	22%	20%	25%	0%	38%	29%	0%	10%	21%
EL	24%	22%	13%	18%	15%	1%	12%	0%	39%	14%	2%	0%	10%
HU	8%	0%	0%	15%	4%	0%	23%	0%	37%	16%	0%	0%	14%
IE	41%	19%	3%	32%	6%	8%	14%	3%	56%	26%	0%	3%	12%
IT	26%	9%	5%	28%	0%	0%	0%	0%	14%	3%	0%	0%	0%
NL	28%	19%	11%	9%	5%	0%	4%	0%	22%	21%	0%	0%	29%
PL	21%	8%	6%	19%	14%	14%	4%	14%	31%	19%	2%	2%	9%
SI	8%	0%	3%	0%	2%	5%	0%	0%	9%	0%	0%	3%	8%
ES	29%	32%	11%	16%	20%	9%	11%	0%	36%	0%	0%	2%	6%
SE	18%	20%	15%	14%	5%	0%	18%	0%	11%	50%	20%	0%	0%
UK	26%	25%	4%	8%	25%	13%	11%	3%	20%	12%	0%	1%	4%
EU17	29%	22%	9%	15%	17%	10%	11%	2%	31%	13%	1%	2%	8%

Note: responses were weighted using frequency weights to ensure that the sample age and gender structure represents the age and gender structure of the population,

Annex 7 Answers to open-ended questions in the survey

In this annex we provide tables of the most important open-ended questions of the questionnaire. The answers provided are naturally very diverse but we have grouped similar responses in order to provide an overview of the most common responses to open-ended questions. The structure of the annex follows the structure of the questionnaire provided in Annex 1.

Table 20: Question 5: Reasons for purchasing dynamic packages											
	Thought it was a traditional package	**Usual**	**Easier**	**Know the area**	**Curious**	**Don't like traditional packages**	**Advertisement or offer**	**Trust**	**Recommended**	**Don't know / no reason provided**	**Reasons given in question**
Austria			5	1	1	2	2	1		20	14
Bulgaria											
Czech Republic		4	2			1		1	1	13	4
Denmark	1		5							11	4
Finland		2	7				2	3	1	14	7
France	2	3	9			6	2	3	1	35	32
Germany			8	1				1		10	10
Greece		1	20			3	1	8	4	8	17
Hungary		5	7					4	5	11	7
Ireland		1	2				1			8	6
Italy	1	1	3					1	1	5	3
Netherlands		4	34	2	2		3	2	3	31	38
Poland		4	6				2	5	9	37	35
Slovenia		4	1		1		1	1	2	19	8
Spain		1	8					5	5	14	7
Sweden			10	1		1	2		1	10	11
UK		5	12					4	4	24	5
Total	4	35	117	5	4	13	16	39	37	270	211

Table 21: Question 8: Problems experienced											
	Information not correct/ incomplete	**Services provided of poor quality, provided late or not provided at all**	**Cleanliness, health and safety**	**Items not working**	**Transport delay and waiting time**	**Staff quality**	**Cancellation or bank-ruptcy**	**Luggage issues**	**Pay-ment**	**Other reason**	**No problem stated**
Austria	5	3	2	1	6	1	2	2		3	1
Bulgaria	4	18	1	0	3	0	8	3		8	
Czech Republic	10	3	1	1	2	2		2		5	3
Denmark	12	7		1	6		2	2		5	
Finland	5	7	3	2	6	1		2		14	1
France	17	9	4		17		3	1	3	8	1
Germany	8	2	4		4	4	2	1		2	1
Greece	19	5	1		13	3	1	3	5	8	3
Hungary	5	9		1	1	1	1	1	1	2	1
Ireland	10	6	2		12	1	4	3	1	8	1
Italy	8	5	2	1	10	0	0	2	1	5	
Netherlands	7	6		1	2				4	8	2
Poland	8	4	1		10	1	1	2		6	
Slovenia	11	7	5		8	2	1	1	1	6	3
Spain	11	3			4	2		5	4	9	
Sweden	6	11	1	2	8			4		2	1
UK	15	22	5	2	12	4	4	3	1	11	
Total	161	127	32	12	124	22	29	37	21	110	18

Table 22: Question 13: Elements included											
	Permission to bring pet	**Private beach, pool, beach house, sauna or deck chair**	**Travel literature or souvenir**	**Boat, airplane, motorbike or cycle rental**	**Baggage allowance**	**Chauffeur, cleaning, laundry**	**Visa**	**Insurance**	**Parking**	**Baby-sitting or disability assistance**	**Options given in question**
Austria			1	2	1	3	1	8	12		54
Bulgaria								2			13
Czech Republic	1	14		6	1	1	2	34	1	1	104
Denmark				5		2		11	1	1	7
Finland						1		2			58
France		2				1		5			24
Germany		2		9		1	3	6			37
Greece		1					1	11	1		24
Hungary								14			20
Ireland		1					1	11	1		10
Italy											7
Netherlands			1	6		3		2	1		43
Poland		1		2	2			33	1		36
Slovenia								2			23
Spain								4	3		8
Sweden				3			1	8	1		19
UK								22	3		
Total	1	21	2	33	4	12	9	175	25	2	487

Annex 8 Estimating the value of time in the 17 survey countries

Unfortunately, we have no comparable information on hourly earnings available for all 17 sample countries. Instead we use an estimate of hourly earnings in the UK from the 2008 Annual Survey of Hours and Earnings from the UK Office of National Statistics as a starting point. According to this source, the average hourly earnings in the UK are .£13.9/hour or €15.7/ hour.

The average hourly earnings of the other 16 survey countries and EU-17 are estimated as:

Box A9.1: Hourly earnings in country X

Value of time in country X =

UK average hourly earnings in € / GDP per capita in the UK x GDP per capita in country X

As described in the main text we believe that time in this study should be valued as leisure time and thus at 1/3 of the hourly earnings. Our estimates of the value of time are given below:

Table 23: Estimate of the value of time			
Country	**GDP per capita in €**	**Estimate of hourly earnings in €**	**Estimate of the value of time**
Austria	33800	17.92	5.97
Bulgaria	4500	2.39	0.80
Czech Republic	14200	7.53	2.51
Denmark	42500	22.54	7.51
Finland	35000	18.56	6.19
France	30400	16.12	5.37
Germany	30300	16.07	5.36
Greece	21600	11.45	3.82
Hungary	10500	5.57	1.86
Ireland	41800	22.17	7.39
Italy	26300	13.95	4.65
Netherlands	36200	19.20	6.40
Poland	9500	5.04	1.68
Slovenia	18200	9.65	3.22
Spain	24000	12.73	4.24
Sweden	35600	18.88	6.29
UK	29700	15.75	5.25
EU-17	**26407**	**14.00**	**4.67**

Source: London Economics based GDP per capita data from Eurostat and an estimate of the hourly wage rate in the UK from the 2008 Annual Survey of Hours and Earnings, UK Office for National Statistics.

Annex 9 Extrapolation of incidence and detriment calculations to EU-27

We extrapolate our estimates of:

- The incidence of purchase of dynamic packages among households in the last 2 years;
- The incidence of use of dynamic packages in the population in the last two years;
- The incidence of problems in the population in the last 2 years;
- Annual net detriment and detriment per capita; and
- Annual gross detriment and detriment per capita.

All these variables depend on country characteristics and therefore we can use cross-country estimation to extrapolate the estimates to EU-27. In this annex we consider the details of the methodology applied to extrapolate the estimates and the details of the calculations for of the extrapolated variables.

We emphasise that the level of accuracy for the extrapolated values is less than the level of accuracy for values for EU-17 and for the individual survey countries. The reason is that extrapolation relies on a number of assumptions which add uncertainty to the estimates.

A9.1 Methodology for extrapolation

The survey covered 17 of the 27 EU Member States. The estimates of the variables we want to extrapolate depend on country characteristics. Since the countries included in the sample may differ from the countries excluded from the sample we cannot simply assume that the EU17 average is equal to the EU27 average. Instead we use cross-country regressions with country specific variables to obtain parameter estimates which can be used to predict the variables we want to extrapolate in the 10 non-survey countries. Ultimately based on all 27 country estimates we can estimate the EU-27 average. In this section we present the methodology applied and in the next sections we presents the details of the estimations.

The first step of the methodology is to do a cross-country regression on data for the 17 survey countries. We perform an OLS regression of the following form:

$$y_i = \alpha + \beta X_i + \varepsilon_i \text{ for } i=1,2,\ldots,17$$

where y denotes the variable we would like to extrapolate, α denotes a constant, β is a vector of parameters and X is a matrix containing country specific variables (e.g. GDP per capita, internet penetration, area dummies). Notice that y is observed only for the 17 survey countries but X is observable for all 27 EU Member States. In practice we use data from Eurostat in X.

From the cross-country regression we obtain the parameter estimates a and b of α and β, respectively. We use these parameter estimates to predict y in the 10 non-survey countries:

$$y'_i = a + bX_i \text{ for } i=18,19,\ldots,27$$

where y' denotes the predicted value.

Finally, we calculate the EU-27 average as a weighted average of y_i for the 17 survey countries and y_i' for the 10 non-survey countries. We use population size as weights.

A9.2 Incidence of purchase among households

The incidence of purchase among households can be interpreted as the share of households which have purchased dynamic packages within the last 2 years. In this case y is the percentage of households who had used dynamic packages.

We expect that this may depend on the level of GDP per capita, the level of internet penetration and a number of regional dummies. In particular we assume that X= (GDP per capita, internet penetration, Scandinavian, Mediterranean, Eastern European). We choose Scandinavian, Mediterranean and Eastern European as regional dummies because survey results have shown that these groups of countries often differed from the remaining countries in the sample.

We use a general to specific estimation approach where we drop variables in the regression until all variables included in the regression are significant at the 10% level.

The regression results suggest that the incidence of purchase among households in EU-17 is increasing in GDP per capita and that Mediterranean and Eastern European Countries purchase many dynamic packages given the level of GDP in these countries.

Table 24: Estimation results for the incidence of purchase among households				
Variable	**Coefficient**	**Standard error**	**t-value**	**p-value**
a) GDP per capita	0.001297	0.0003862	3.36	0.005
b) Mediterranean	10.25136	4.951258	2.07	0.059
c) Eastern European	21.12411	9.461205	2.23	0.044
d) Constant	-17.93457	13.49564	-1.33	0.207
Number of observations	17			
F(3,13)	4.82			
R^2	0.5268			

We emphasize that given the low number of countries which can be included in the regression an R^2 of 53% is actually quite good. This allows us to estimate the incidence of purchase among households in the 10 non-survey countries and in EU-27. The estimate for EU-27 is a weighted average of the 27 country estimates using population size as weights.

Notice that for Luxembourg we adjust GDP per capita to reflect the fact that only 57% of employees in Luxembourg are resident and the remaining 43% are cross-border workers[45]. This implies that GDP per capita is an inflated measure of wealth held by residents in Luxembourg and by using the full amount of GDP per capita would lead to overestimation of the extrapolated variables in Luxembourg.[46] Therefore, we adjust the wealth measure used in Luxembourg to 57% of GDP per capita in all extrapolations.

We estimate that the incidence of purchase in EU-27 is 23%. The lowest predicted values are found in Malta and in Romania and are 10-11%. At the opposite extreme the prediction suggests that the incidence of purchase among households is 38% in Luxembourg. Although higher than the EU-27 average it is lower than the estimated figures for Sweden (44%), Slovenia (42%) and Ireland (46%).

[45] According to OECD (2008).

[46] For instance when using the full amount of GDP per capita in Luxembourg, the methodology results in an estimate of incidence of purchase of 79%. This is much higher than in any of the other countries both in and outside the sample.

Table 25: Estimates of the incidence of purchase among households in the 10 non-survey countries and in EU-27				
Column 1	**Column 2**	**Column 3**	**Column 4**	**Column 5 = a*column 2 + b*column 3 + c*column 4 + d**
Country	**GDP per capita**	**Mediterranean**	**Eastern European**	**Estimate of the incidence of purchase**
Belgium	32400	0	0	24
Cyprus	21400	1	0	20
Estonia	11800	0	1	18
Lithuania	9600	0	1	16
Luxembourg	42807*	0	0	38
Latvia	10200	0	1	16
Malta	14000	1	0	10
Portugal	15600	1	0	13
Romania	6400	0	1	11
Slovakia	12000	0	1	19
EU-27				23

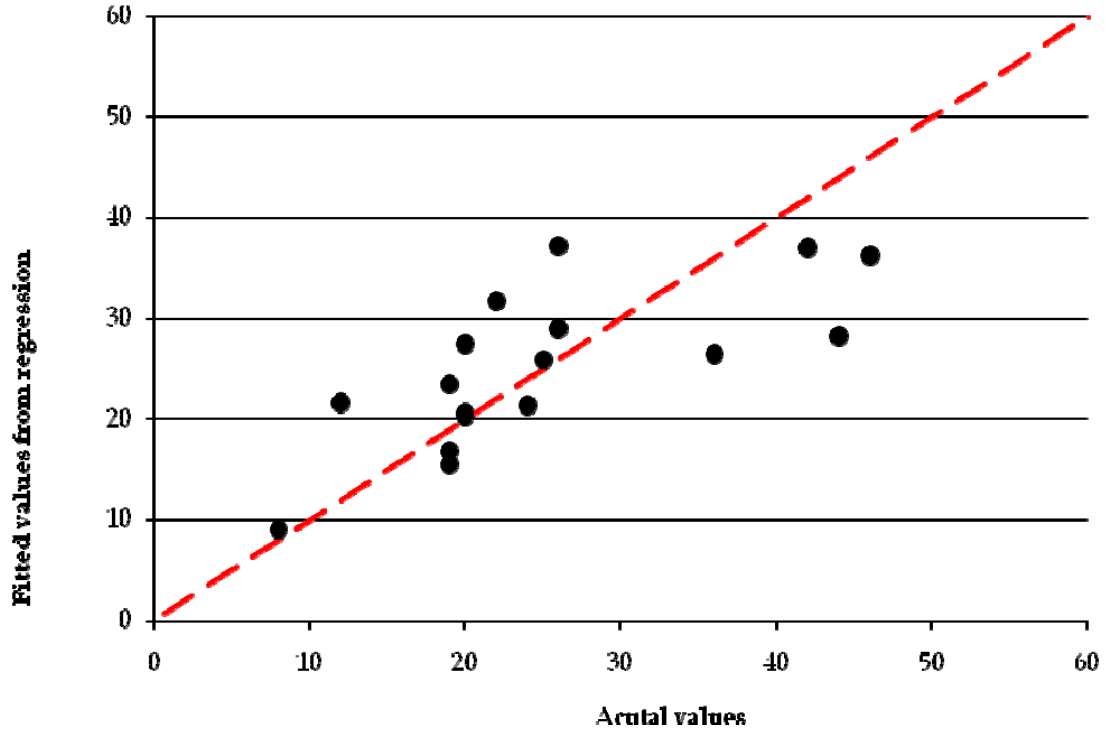
Note: * For Luxembourg only 57% of GDP per capita is used. This is to correct for the fact that only 57% of workers in Luxembourg are resident.
EU-27 is calculated as a weighted average of all 27 country estimates. Population size is used as weights.

The validity of the results can be assessed either by comparing with data from other sources or by considering within sample prediction. There is generally little data available from other sources and therefore only the incidence of use can be validated using data from other sources. Instead we compare the fitted values with the actual values for the sample countries.

Figure 68 is a scatter plot of the fitted and actual values from the regression. The closer the points are to the red 45-degree line the better the predictive capability of

the model used for extrapolation. Deviations from the 45-degree line are relatively minor.

Figure 82: Validation: scatter of fitted and actual values for incidence of purchase



Source: London Economics.

A9.3 Incidence of use in the population

The incidence of use in the population can be interpreted as the share of of the population which has travelled on dynamic packages within the last 2 years. In this case y is the percentage of the population which has used dynamic packages in the last 2 years.

The incidence of use in the population is a very similar concept to the incidence of purchase among households and therefore we expect the same factors to determine both variables. In particular we assume that X= (GDP per capita, internet penetration, Scandinavian, Mediterranean, Eastern European).

We use a general to specific estimation approach where we drop the least significant variables in the regression until all variables included in the regression are significant at the 10% level.

The regression results suggest that the incidence of use in the population in EU-17 is increasing in GDP per capita and that Mediterranean and Eastern European countries are frequent users of dynamic packages given the level of GDP in these countries.

Table 26: Estimation results for the incidence of use in the population

Variable	**Coefficient**	**Standard error**	**t-value**	**p-value**
a) GDP per capita	0.001287	0.0003766	3.42	0.005
b) Mediterranean	10.06343	4.828481	2.08	0.057
c) Eastern European	21.00593	9.226595	2.28	0.040
d) Constant	-17.53583	13.16099	-1.33	0.206
Number of observations	17			
F(3,13)	4.97			
R^2	0.5341			

This allows us to estimate the incidence of use in the population in the 10 non-survey countries and in EU-27. The estimate for EU-27 is a weighted average of the 27 country estimates using population size as weights.

Notice that we estimate that the incidence of use in EU-27 is 23%. The lowest predicted values are found in Malta and in Romania and are 11-12%. At the opposite extreme the prediction suggests that the incidence of use in the population is 38% in Luxembourg.

Table 27: Estimates of the incidence of use in the population in the 10 non-survey countries and in EU-27

Column 1	**Column 2**	**Column 3**	**Column 4**	**Column 5 =** **a*column 2 + b*column 3 + c*column 4 + d**
Country	**GDP per capita**	**Mediterranean**	**Eastern European**	**Estimate of the incidence of use**
Belgium	32400	0	0	24
Cyprus	21400	1	0	20
Estonia	11800	0	1	19
Lithuania	9600	0	1	16
Luxembourg	42807*	0	0	38
Latvia	10200	0	1	17
Malta	14000	1	0	11
Portugal	15600	1	0	13
Romania	6400	0	1	12
Slovakia	12000	0	1	19
EU-27				23

Note: * For Luxembourg only 57% of GDP per capita is used. This is to correct for the fact that only 57% of workers in Luxembourg are resident.
EU-27 is calculated as a weighted average of all 27 country estimates. Population size is used as weights.

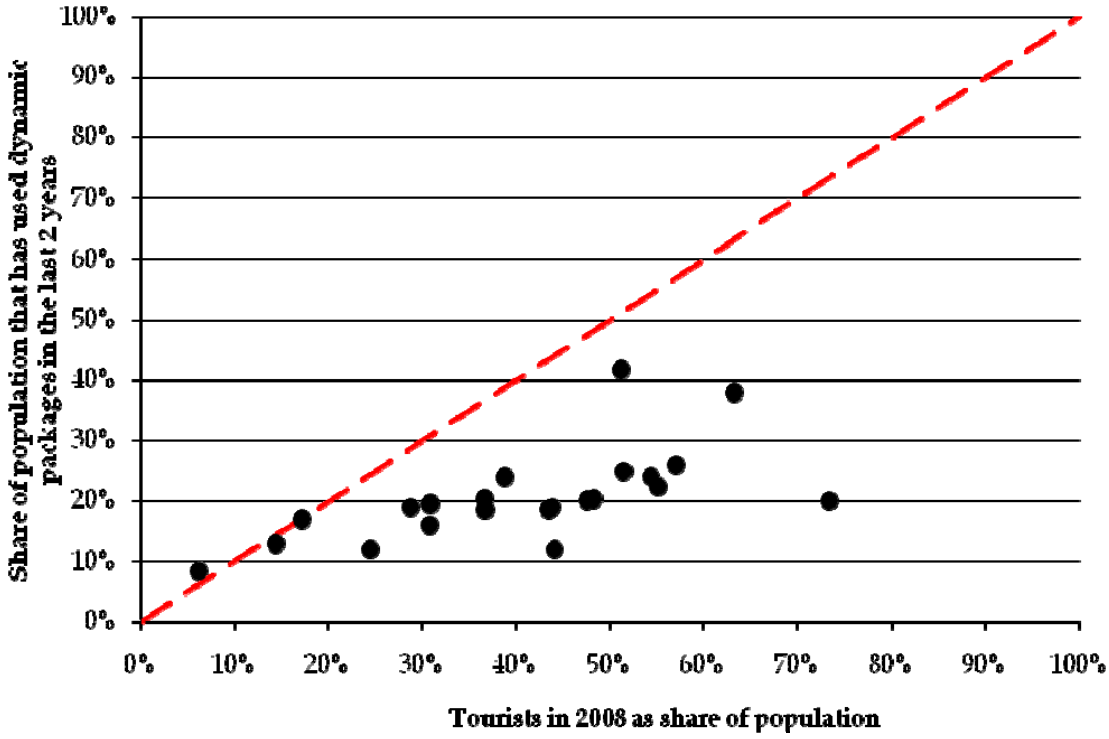
There is very little data available from other data sources which can be used to validate these figures, particularly at the country level. An important difficulty is that the figures obtained in this study relate to a 2 year period and does not provide general insight into the relative importance of dynamic packages to traditional packages and independent travel arrangements.

However, if we are willing to assume that most people have a preference for a particular type of travel arrangements and therefore always use the same type of travel arrangements (dynamic package, traditional package, or independent travel arrangements), then we can compare with the share of tourists to the population in all countries. This data is available from Eurostat. We would expect the share of

people using dynamic packages (the incidence of use) to be less than the share of tourists to the population. In Figure 68 this would correspond to all points being below the red 45-degree line which is the case in all countries with the exception of Bulgaria.

That the incidence of use is estimated to be higher than the number of tourists as a share of the population in Bulgaria may be explained by poor data quality. In particular it seems that the number of tourists in Eurostat is too low when comparing with the number of holiday trips Bulgarians make according to Eurostat. Given the data available in Eurostat it seems that Bulgarian tourists made an average of 5.2 holiday trips in 2008 whereas tourists in all other EU-27 countries made an average of 1-3 holiday trips in 2008 according to Eurostat data. This might suggest that the number of holiday trips according to Eurostat is too high in Bulgaria or that the number of Bulgarian tourists in Eurostat is too low. If the number of Bulgarian tourists is actually higher than the figures reported in Eurostat this would move the Bulgarian point in Figure 68 to the right and possibly to the other side of the red line.

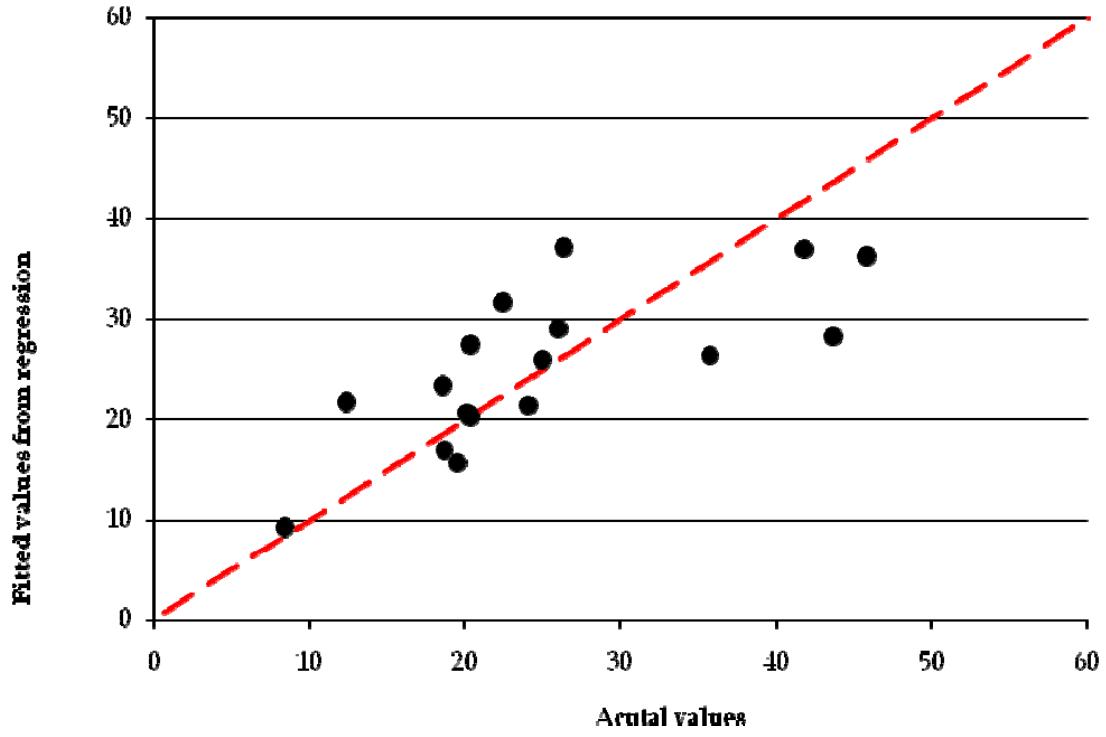
Figure 83: Validation of incidence of use for 27 countries based on Eurostat data



Note: No data was available for Denmark, Ireland, Italy, Malta and Sweden.
Source: London Economics based on survey data from Ipsos MORI and data from Eurostat on the number of tourists and the size of the population.

Figure 68 is a scatter plot of the fitted and actual values from the regression. The closer the points are to the red 45-degree line the better the predictive capability of the model used for extrapolation. Deviations from the 45-degree line are relatively minor.

Figure 84: Validation: scatter of fitted and actual values for incidence of use



Source: London Economics.

A9.4 Incidence of problems in the population

The incidence of problems in the population can be interpreted as the share of the population which has been affected by problems with dynamic packages within the last 2 years. It is important to emphasise that by incidence of purchase we do not mean the likelihood that a problem occurs **given** that people use dynamic packages. There is no reason to believe that the likelihood that problems arise for people using dynamic packages is country specific. However, the incidence of problems in the population in general (i.e. not given purchase of dynamic packages) depends on country factors. In particular, the incidence of problems in the population is highly dependent on the incidence of use in the population.

In particular we assume that X= (incidence of use, GDP per capita, internet penetration, Scandinavian, Mediterranean, Eastern European).

We use a general to specific estimation approach where we drop variables in the regression until all variables included in the regression are significant at the 10% level.

The regression results suggest that the incidence of problems in the population in EU-17 is increasing in the incidence of use and that relatively many people in Mediterranean countries are affected by problems given the incidence of use in the population.

Table 28: Estimation results for the incidence of problems in the population

Variable	Coefficient	Standard error	t-value	p-value
a) Incidence of use	0.054076	0.0169148	3.20	0.006
b) Mediterranean	0.7808864	0.3820784	2.04	0.060
c) Constant	0.2823977	0.4571648	0.62	0.547
Number of observations	17			
F(2,14)	8.44			
R^2	0.5467			

This allows us to estimate the incidence of problems in the population in the 10 non-survey countries and in EU-27. The estimate for EU-27 is a weighted average of the 27 country estimates using population size as weights.

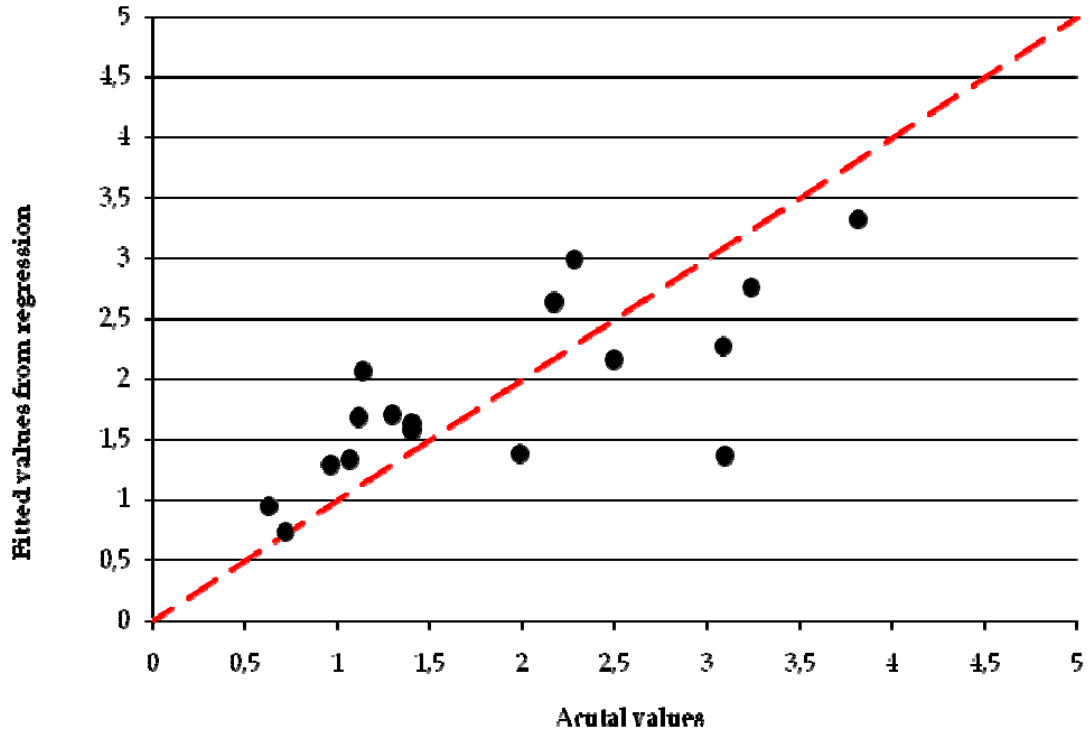
Notice that we estimate that the incidence problems in the population in EU-27 is 1.90%. This is slightly lower than the 2.0% we estimated for EU-17 but given that the incidence of use estimated for EU-27 is slightly lower than EU-17 estimate this is not surprising. The lowest predicted value is found in Romania and is 0.92%. At the opposite extreme the prediction suggests that the incidence of purchase among households is 4.59% in Luxembourg. This seems very high and is driven by the high GDP per capita of the country. Fortunately, in the EU-27 weighted average this observation is not given much weight because of the small size of the country.

Table 29: Estimates of the incidence of problems in the population in the 10 non-survey countries and in EU-27			
Column 1	**Column 2**	**Column 3**	**Column 4 =** **a*column 2 + b*column 3 + c**
Country	**Estimate of the incidence of use**	**Mediterranean**	**Estimate of the incidence of problems in the population**
Belgium	24	0	1.59
Cyprus	20	1	2.15
Estonia	19	0	1.29
Lithuania	16	0	1.14
Luxembourg	38	0	2.31
Latvia	17	0	1.18
Malta	11	1	1.63
Portugal	13	1	1.74
Romania	12	0	0.92
Slovakia	19	0	1.31
EU-27	23		1.90

Note: EU-27 is calculated as a weighted average of all 27 country estimates. Population size is used as weights.

Figure 68 is a scatter plot of the fitted and actual values from the regression. The closer the points are to the red 45-degree line the better the predictive capability of the model used for extrapolation. Deviations from the 45-degree line are relatively minor with the exception of the UK where the predicted value is 1.4% whereas the actual value is 3.1%. However, overall it does seem reasonable to use the model for out-of-sample predictions.

Figure 85: Validation: scatter of fitted and actual values for incidence of problems



Source: London Economics.

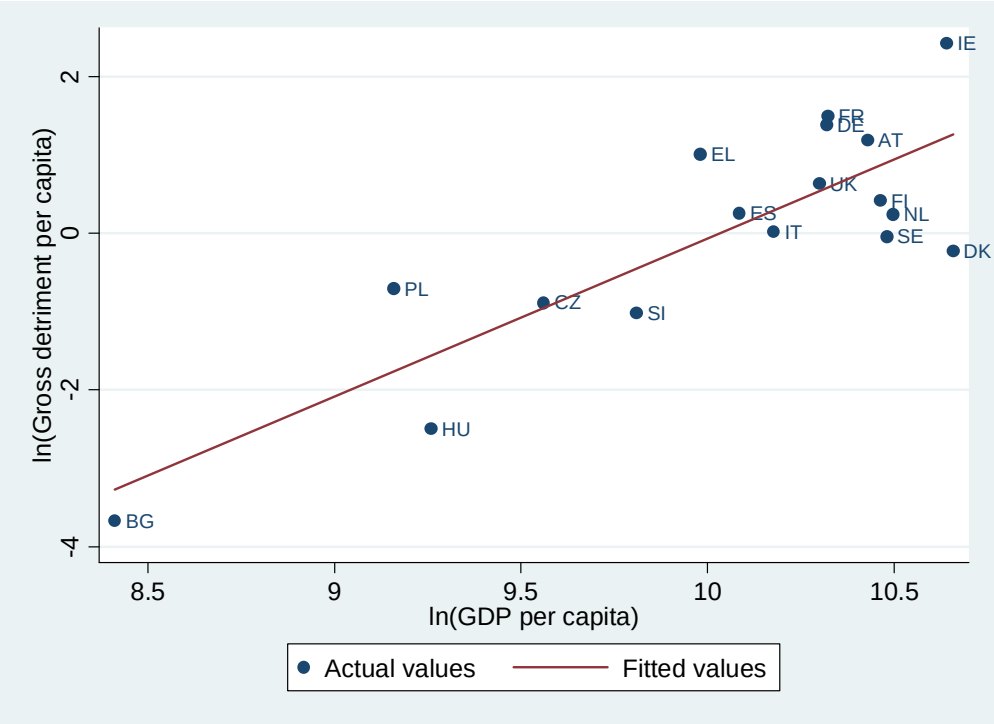
A9.5 Gross detriment

We aim at extrapolating gross detriment per capita and the total value of gross detriment. In order to do this we only need to extrapolate gross detriment per capita and then given the size of the population in EU-27 we can calculate an estimate of the total value of detriment in the population. In this case, y in the regression is the level of gross detriment per capita.

The level of gross detriment per capita is likely to depend on the incidence of problems because more problems in the population are expected to lead to more detriment. In addition, the level of GDP per capita might affect the detriment level through the effect on the price of a package and the willingness to pay to put the problem right. Further internet penetration may affect the detriment level because survey results indicate that higher levels of detriment are associated with packages purchased from websites. Further we have shown that internet penetration is a strong predictor of the share of website purchases. In addition, the perception of the size of problems may depend on cultural factors.

Finally, analysis of the data reveals that there is not a linear relationship between GDP per capita and gross detriment per capita. Instead there seems to be a linear relationship between the log-transformed values i.e. ln(Gross Detriment per capita) and ln(GDP per capita).

Figure 86: Scatter plot of log-transformed gross detriment per capita and GDP per capita



Therefore we assume that X= (incidence of problems, ln(GDP per capita), internet penetration, Scandinavian, Mediterranean, Eastern European) and that y = ln(gross detriment per capita).

We use a general to specific estimation approach where we drop variables in the regression until all variables included in the regression are significant at the 10% level.

The regression results suggest that gross detriment per capita, as expected, is increasing in GDP per capita. Further, we find that given GDP per capita, Scandinavian countries have a relatively low level of detriment.

Table 30: Estimation results for ln(gross detriment per capita)				
Variable	**Coefficient**	**Standard error**	**t-value**	**p-value**
a) ln(GDP per capita)	2.358749	0.3063723	7.70	0.000
b) Scandinavian	-1.373333	0.4790886	-2.87	0.012
c) Constant	-23.42196	3.04638	-7.69	0.000
Number of observations	17			
F(2,14)	29.65			
R^2	0.8090			

This allows us to estimate ln(gross detriment per capita) in the 10 non-survey countries and in EU-27. The estimate for EU-27 is a weighted average of the 27 country estimates using population size as weights. Based on these estimates we can estimate gross detriment per capita as:

$$\text{Gross detriment per capita} = \exp(y')$$

We estimate that gross detriment per person who have used dynamic packages within the last 2 years is €9.3 in EU-27. This is slightly lower than the €9.4 we estimate for EU-17. We find a lower value of gross detriment per person for EU-27 than for EU-17 because many of the non-survey countries have relatively low GDP per capita.

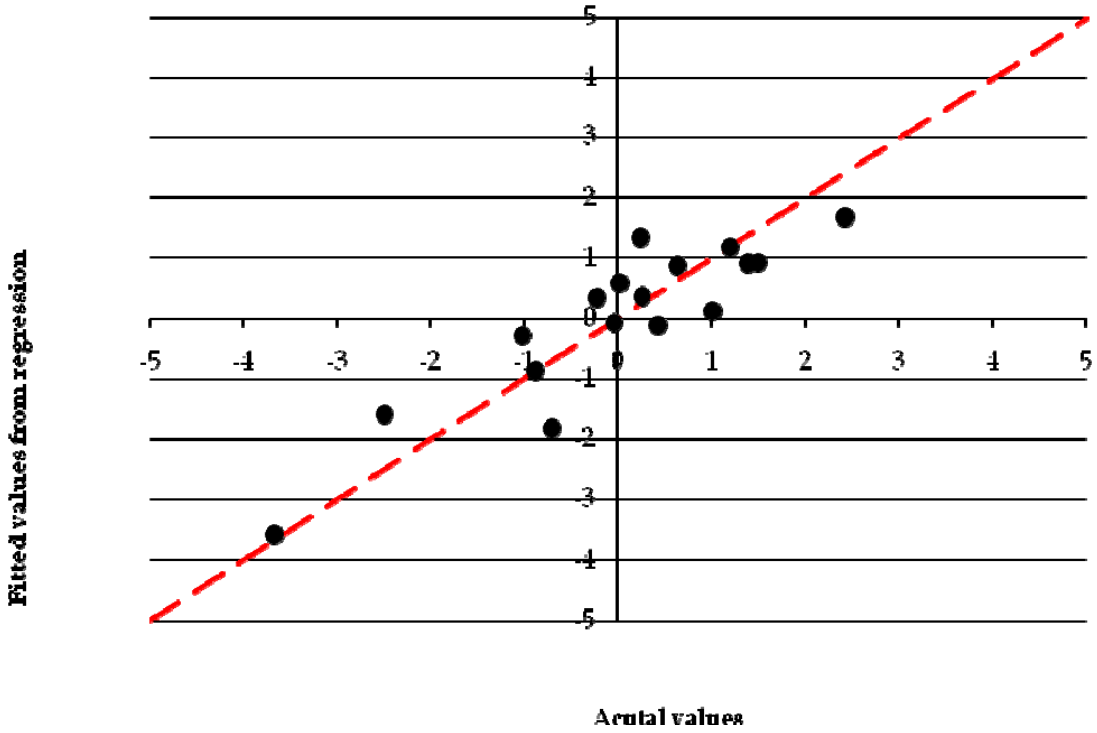
Our estimate of gross detriment per person of €9.3 implies that gross personal detriment from dynamic packages in EU-27 is estimated at a total value of €1.065 billion[47].

It is worth noting that most of the detriment is found to originate in the 17 survey countries (€1.020 billion). The reason is that the 17 survey countries are big economies – both in terms of population size and GDP per capita. In fact the GDP of the 10 non-survey countries is only about 7% of GDP in the 17 survey countries. In other words, it is very reasonable to expect that total expenditure on dynamic packages and total detriment is quite low in the 10 non-survey countries because there are relatively few people in these countries and their income level is relatively modest.

[47] Calculated as gross detriment per capita x total population in EU-27 = 9.3 x 497,444,638 x 23%= €1.065 billion.

Figure 68 is a scatter plot of the fitted and actual values from the regression. Deviations from the 45-degree line are relatively minor and therefore the predictive power of the model seems reasonably good.

Figure 87: Validation: scatter of fitted and actual values for incidence of problems



Source: London Economics.

A9.6 Net detriment

Net detriment per capita most certainly depends on gross detriment per capita and therefore it seems very reasonable to base our extrapolation on or extrapolation of gross detriment per capita. In addition, net detriment depends on the access to redress. The access to redress could depend on the incidence of problems, GDP per capita, internet penetration and regional characteristics.

Therefore, y in this case is net detriment per capita and we assume that X= (gross detriment per capita, incidence of problems, ln(GDP per capita), internet penetration, Scandinavian, Mediterranean, Eastern European).

We use a general to specific estimation approach where we drop variables in the regression until all variables included in the regression are significant at the 5% level.

The regression results suggest that net detriment per capita as expected is increasing in gross detriment per capita. In addition, net detriment per capita depends negatively on the incidence of problems. This is most likely because the access to redress is increasing in this variable. If there are many problems in the economy it is more likely that the access to redress has been developed more extensively.

Table 31: Estimation results for net detriment per capita

Variable	Coefficient	Standard error	t-value	p-value
a) Gross detriment per capita	1.018804	0.0097924	104.04	0.000
b) Incidence of problems	-0.0952464	0.0269458	-3.53	0.003
c) Constant	-0.0021687	0.0505969	-0.04	0.966
Number of observations	17			
F(3,13)	6614.45			
R^2	0.9989			

This allows us to estimate net detriment per capita in the 10 non-survey countries and in EU-27. The estimate for EU-27 is a weighted average of the 27 country estimates using population size as weights.

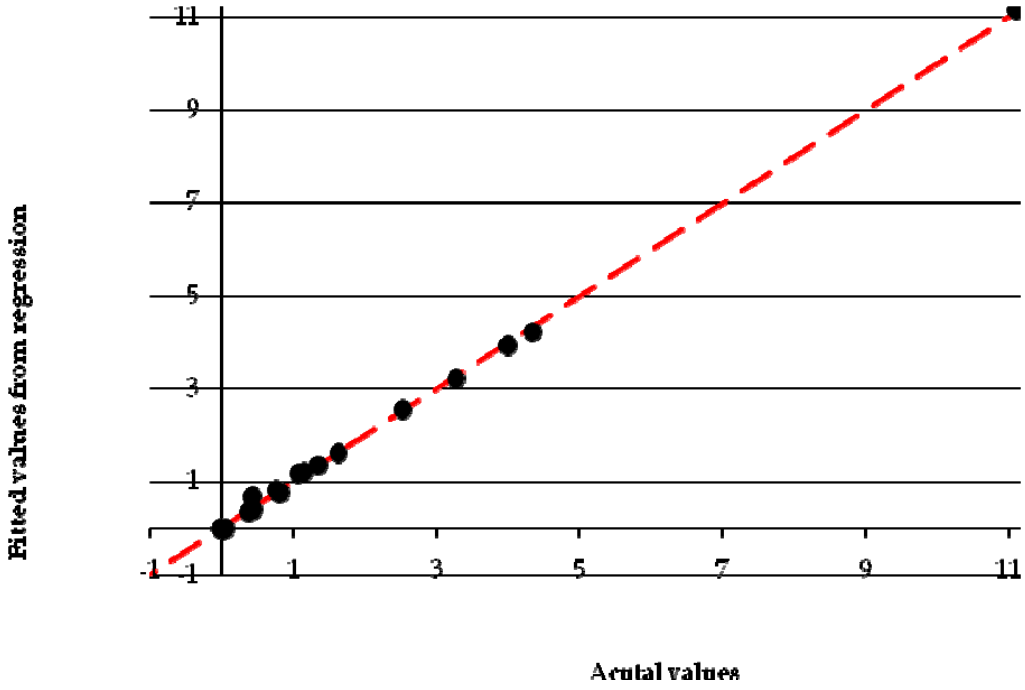
We estimate that net detriment per person who have used dynamic packages over the last 2 years is is €8.8 in EU-27. This is slightly lower than the €8.9 we estimate for EU-17. This is not unexpected given that we found a lower estimate of gross detriment per capita for EU-27 than for EU-17.

Our estimate of net detriment per person of €8.9 implies that net personal detriment from dynamic packages in EU-27 is estimated at a total value of €1.005 billion[48].

Figure 68 is a scatter plot of the fitted and actual values from the regression. All points are approximately on the red 45-degree line and the predictive power of the model seems very good. However, it should be noted that for the out-of-sample predictions this model relies on good predictions of gross detriment per capita and therefore prediction errors in net detriment will be almost identical to prediction errors in gross detriment.

[48] Calculated as gross detriment per capita x total population in EU-27 = €8.9 x 497,444,638 x 23%= €1.005 billion.

Figure 88: Validation: scatter of fitted and actual values for incidence of problems



Source: London Economics.

11-15 Betterton Street
London WC2H 9BP
Tel: +44 20 7866 8185
Fax: +44 20 7866 8186
Email: info@londecon.co.uk

London | Brussels | Dublin | Paris | Budapest | Valletta