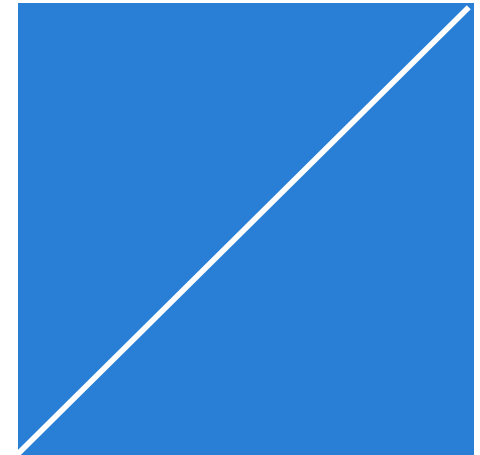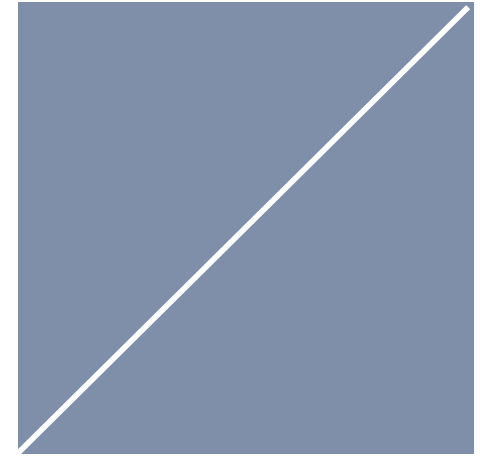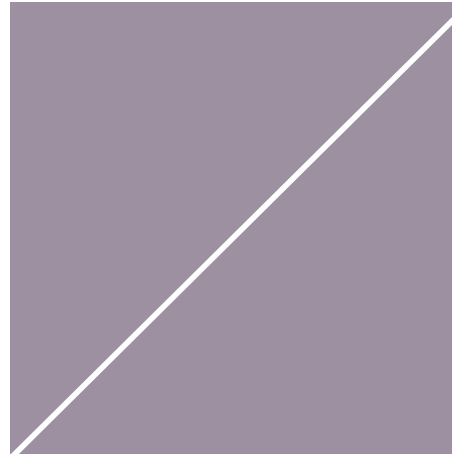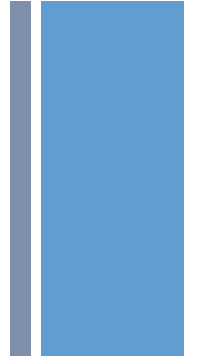# Determinants of European tourism demand in a demographic ageing society

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demography laboratory

V congresso português de demografia
a crise demográfica
um país em extinção?
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+ AGENDA

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3. Methods

4. Results

5. Conclusions and implications
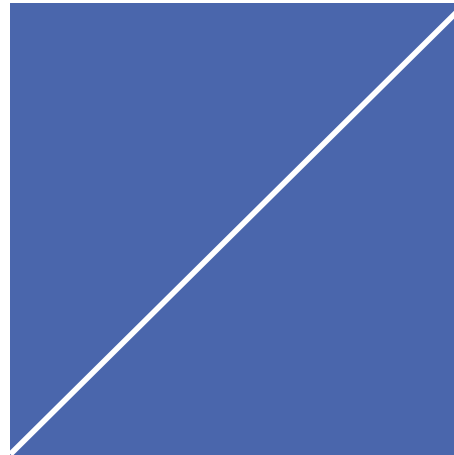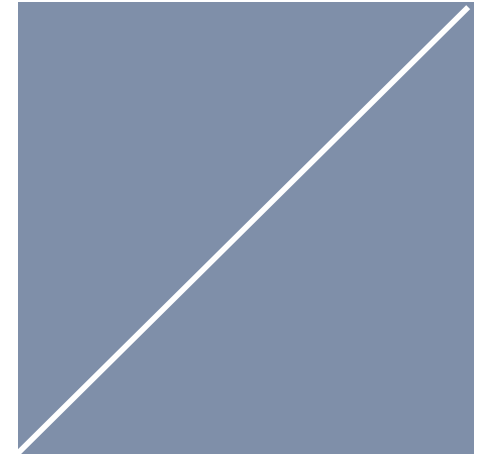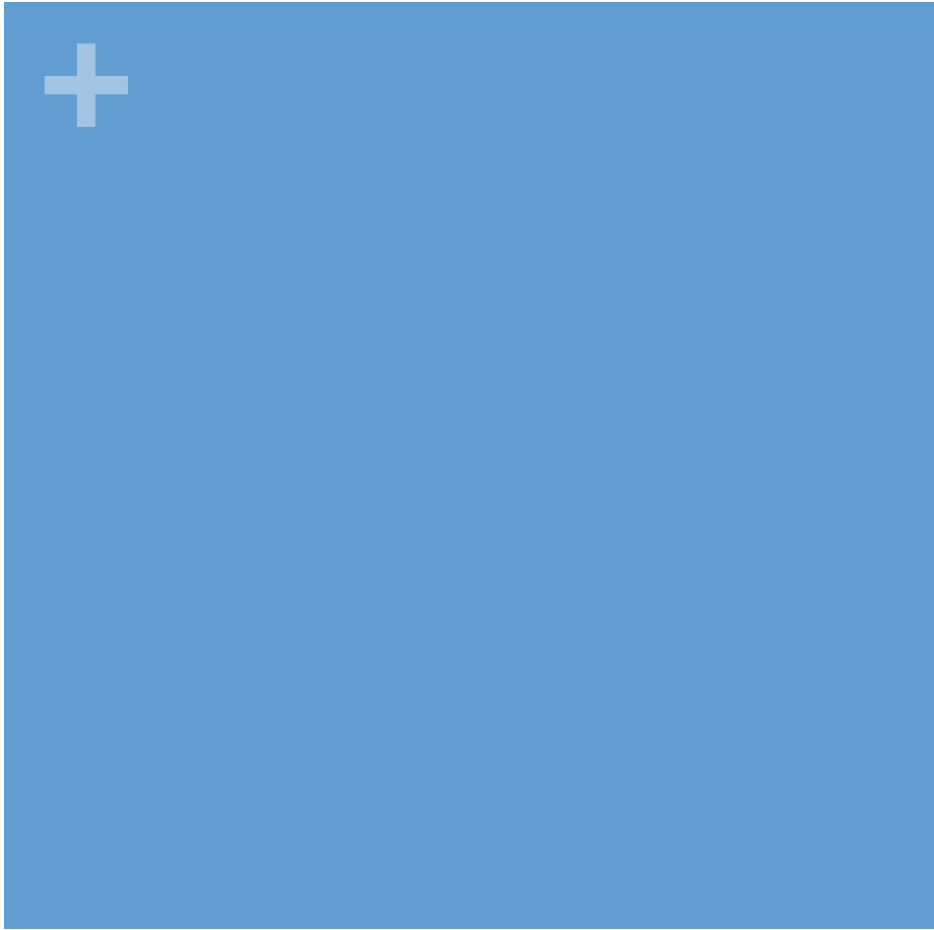
1. Introduction

+ Axioms that drove this research

- **Population ageing is occurring across the entire world** and this effect leads the humanity throughout **new patterns of political, social, cultural and economic challenges** (Bernini and Cracolini, 2015);

- **Literature about tourism and demography** is dominated by discussions on sustainability, but the **demographic perspective is largely ignored.** (Yeoman et al, 2013);

- EUROSTAT'S **demographic projections for 2050 highlighted a profound ageing effect on EU population** (UN, 2012);

- **In 2050 28.1% of the European population will be over the age of 65**, but countries such as Portugal, Germany, Spain and Italy will present **higher values than the average European ageing rate**;

- **UK** (one of the most relevant international tourism markets for Portugal) **faces an average growth of 78.9% of its elderly population between 2013-2060** (EC, 2014).

+ the aim of our research is...
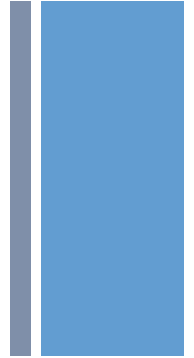
- to relate the population structure and international tourism demand in Portugal;

- to suggest tourism demand scenarios supported by demographic projections.

- to estimate the determinants of senior European tourists to go on holidays in Portugal;

+ contextual settings: European tourism demand in Portugal

Figure 1. TOP 10 European destinations
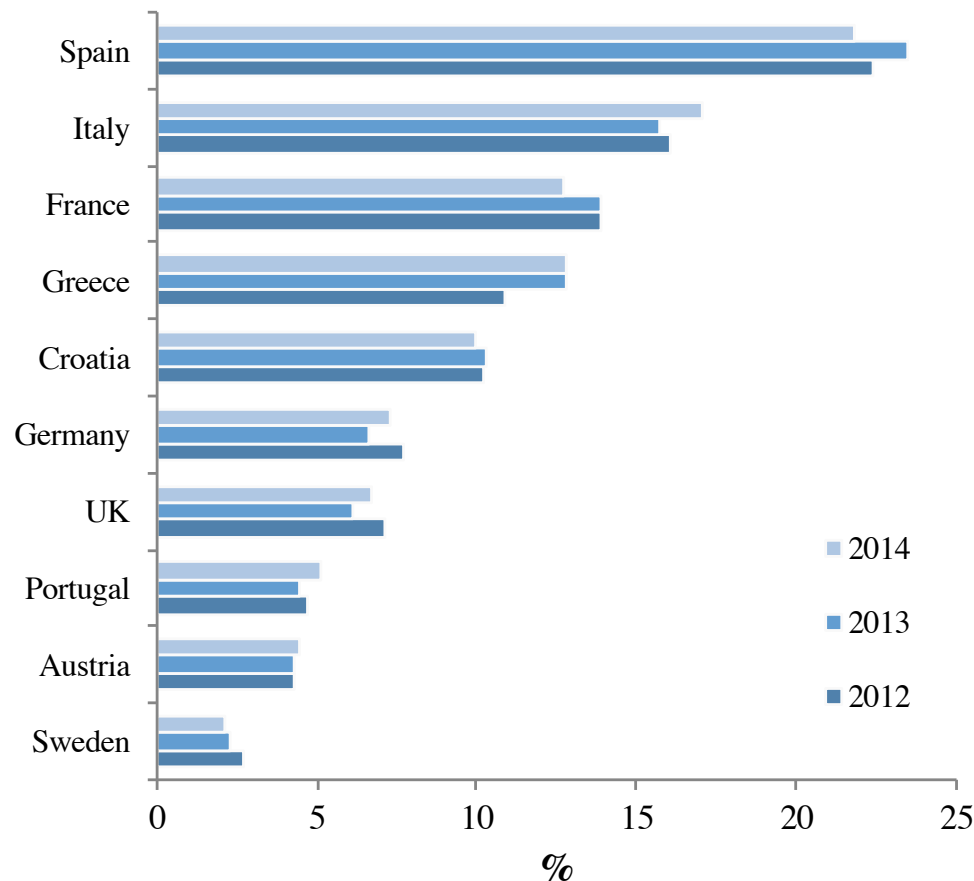
Source: EC, 2014

- Fig. 1, we observe that within the 10 countries, 4 are southern, characterized by the lowest-low fertility rates (below 1.3 children per woman) observed in Europe since 1990s.

- Portugal was also acknowledge in 2011 as the 6th most aged country in the world (Mendes and Tomé, 2014).

+ contextual settings: international tourism demand in Portugal

Portugal Tourism highlights

2015

48.850.700 overnight stays

70,4% international tourists

29,6% domestic tourists

TOP 10 - Year 2015

1.º United Kingdom

2.º Germany

3.º Spain

4.º France

5.º The Netherlands

→ **TOP 5 65%**

6.º Brazil

7.º Ireland

8.º Italy

9.º USA

10.º Belgium

TURISMO DE **PORTUGAL**

PORTO E NORTE

CENTRO DE PORTUGAL

AÇORES

LISBOA REGIÃO

ALENTEJO

MADEIRA

ALGARVE

Source: INE, Tourism de Portugal (2016)

Ageing characteristics of European tourism demand in Portugal

- Considering samples from Attitudes of Europeans towards tourism, we identify an increasing proportion of those aged 55-64 and aged 65+.

- 2013 was the year with highest proportion of elderly foreigner tourists in Portugal (age 65+).

- On average, individuals aged 55+ represented 50% of tourist demand across the 5 nationalities under analysis – German, Spanish, French, Dutch and British.
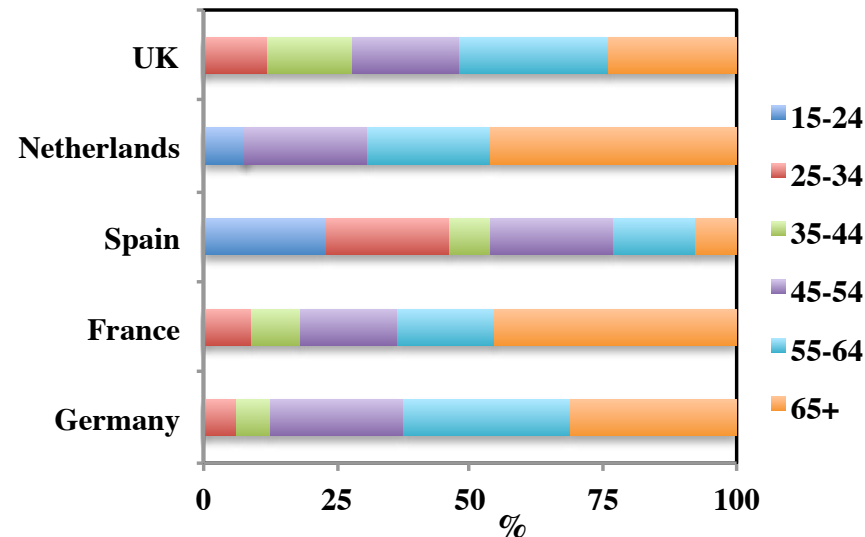
Figure 2. Distribution of individuals who came on holiday to Portugal by age groups in 2012, 2013 and 2014
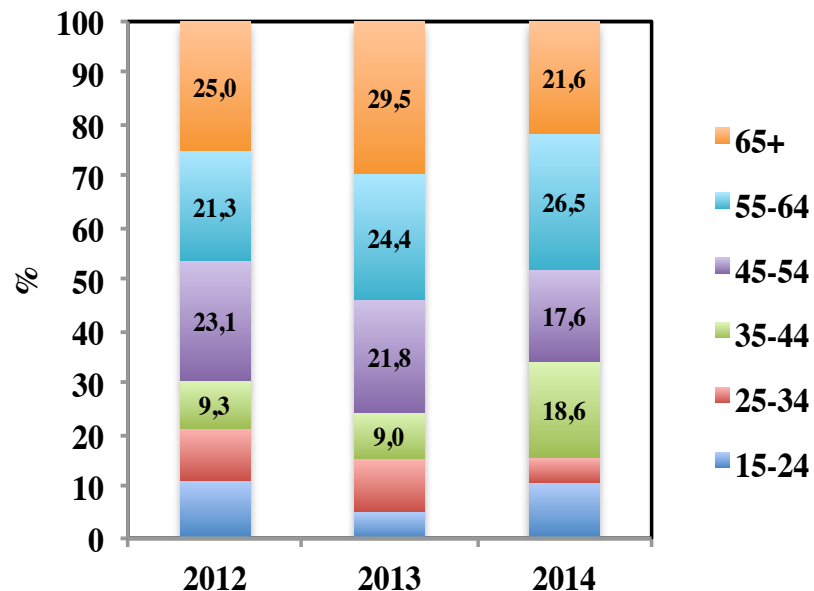
Source: Attitudes of Europeans Towards Tourism (2013/2014/2015). Author's computation.

Ageing characteristics of European tourism demand in Portugal

Figure 3. Distribution of individuals who came on holiday to Portugal by age groups and by country of origin in 2013

Source: Attitudes of Europeans Towards Tourism 2014. Author's computation.

- Accordingly to their nationality, and taking 2013 (Figure 3) as example, **we can identify Spain as the country from where younger tourists are choosing Portugal as main choice for holidays**.

- Spanish tourists in Portugal are generally younger than other nationalities as we can observe in the figure. On the other hand, **52,0 % of British tourists in Portugal aged 55+, while in Germany the value raises to 62,6 %, in France to 63,7 % and in Netherlands to 69,3 %.**

Ageing characteristics of European tourism demand in Portugal

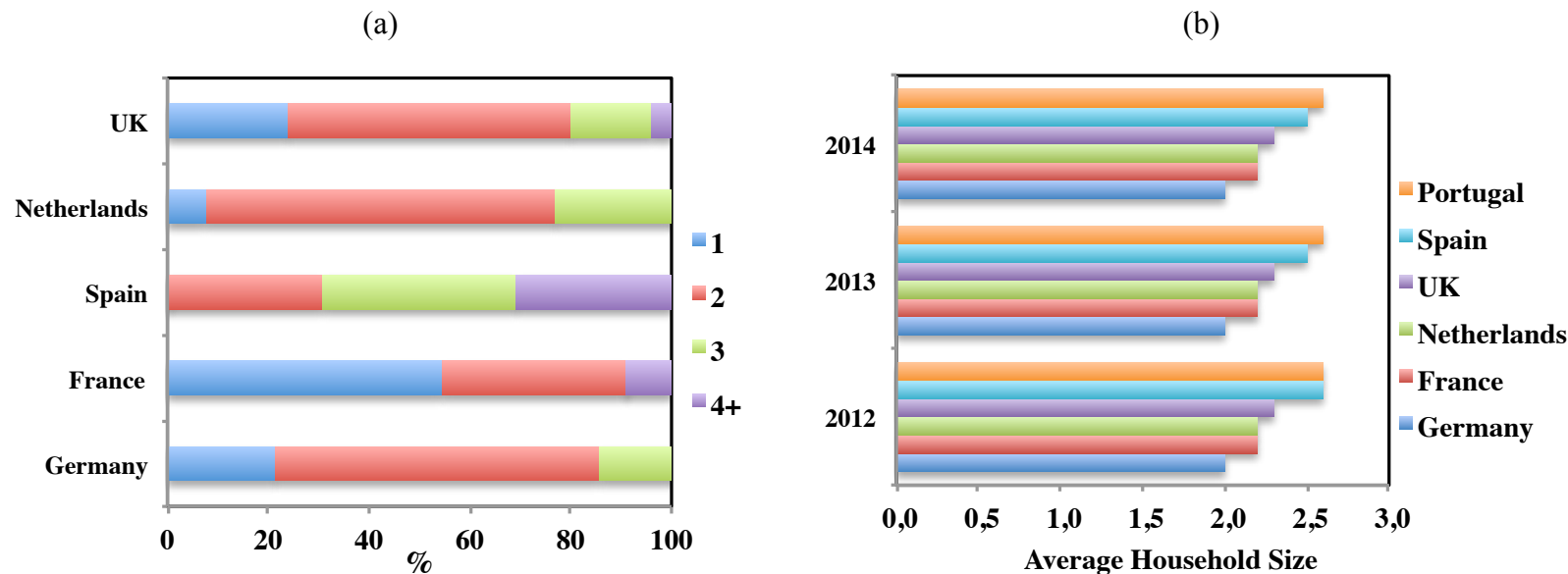**Figure 4. Distribution of individuals who came on holiday to Portugal aged 15 or more living in the same household, by country of origin in 2013 (a) and Average Household size by country of residence in 2012, 2013 and 2014 (b)**

(a)   (b)

Source: Attitudes of Europeans Towards Tourism 2014 and EUROSTAT. Author's computation.

- Figure 4 not only presents the household size of tourists that choose Portugal as main destination (2013), but also the average size of households accordingly with the country of origin. Figure 4a, reveals that the most **common household size of 2013 respondents is 2, corresponding to 69,2 % among Dutch, 64,3 % among Germans and 56,0 % among British tourists**.

- Figure 4b, on the other hand, shows that the **average household size by country of origin goes along with the obtained results for the 2013 sample.**

Relation between population structure and European tourism demand in Portugal

Figure 5. Life Expectancy at Birth (a) and Total Fertility Rate (b) in Portugal, France, Germany, Netherlands, United Kingdom and Spain

(a)

(b)
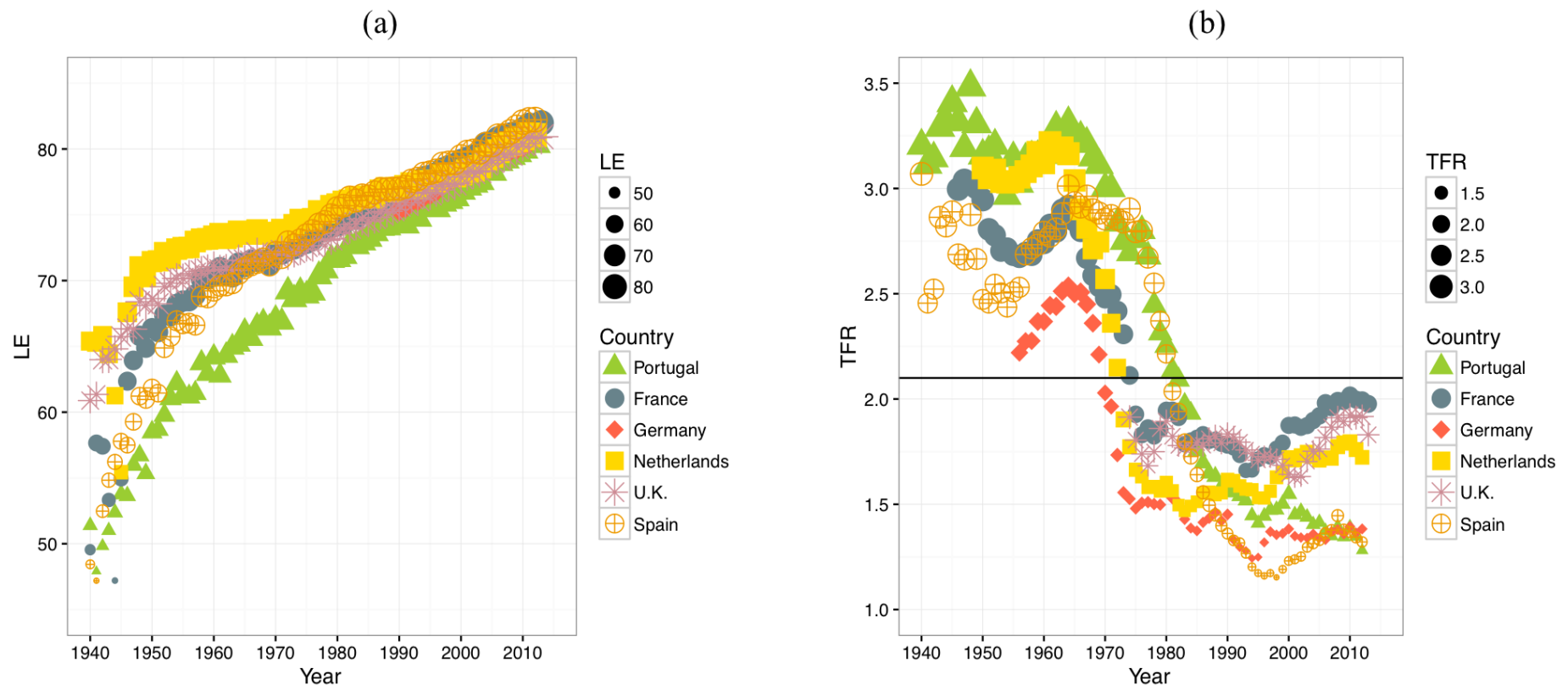
Source: Human Fertility Database and Human Mortality Database. Author's computation.

Relation between population structure and European tourism demand in Portugal

- All countries presented are under the minimum level necessary to replace generations (**2,1 children per woman**).

- Still, it can be also clearly distinguished two main groups of countries among the 6:

  - **Portugal, Spain and Germany**. Portugal, Spain and Germany were even recognized often in the literature as those that in the last decades, in Europe, with the lowest fertility levels (Tomé, 2015; Goldstein *et al.*, 2009).

  - **France, U.K. and Netherlands**.

- This has main implications on the socio-demographic structure of all countries under study without exception: *a)* **with less new-born the average household size tends to diminish**; and *b)* **with extending lifespan households will also become older and older across time**. Nevertheless, **those that are nowadays considered elderly are achieving older ages with improving health**.

European tourism demand scenarios supported by demographic projections

- **Methods**

  - the cohort-component population projection approach is the most consensual method for population projections worldwide (Rowland, 2003; Preston *et al*. 2001), and thus it is our choice to produce population forecasts for countries under study.

  - we also added a probabilistic component to the method with the inclusion of a coherent functional method.

  - **The coherent functional approach seeks to ensure that constructed forecasts for populations "maintain certain structural relationships based on extensive historic observation" Hyndman, Booth and Yasmeen (2013), e.g., females always present <u>higher</u> life expectancy <u>than</u> males through history.**

European tourism demand scenarios supported by demographic projections

- With the methodological framework we elaborated coherent population projections, by extrapolating past tendencies, for 2031, across all countries under study.

- Results are presented in the following Figure - **Population pyramids are constructed in percentage**, in order to allow cross-country comparisons, and as usual, **male are represented on the left (grey) and female on the right (black)**. On the correspondent sides, **the red lines represent the population projections for 2031**.

- **The starting year represented in black and white varies accordingly with country's data availability**: U.K. and France - 2013; Netherlands, Spain and Portugal - 2012; and Germany - 2011.

European tourism demand scenarios supported by demographic projections

Figure 6. Coherent population forecasts for 2031.
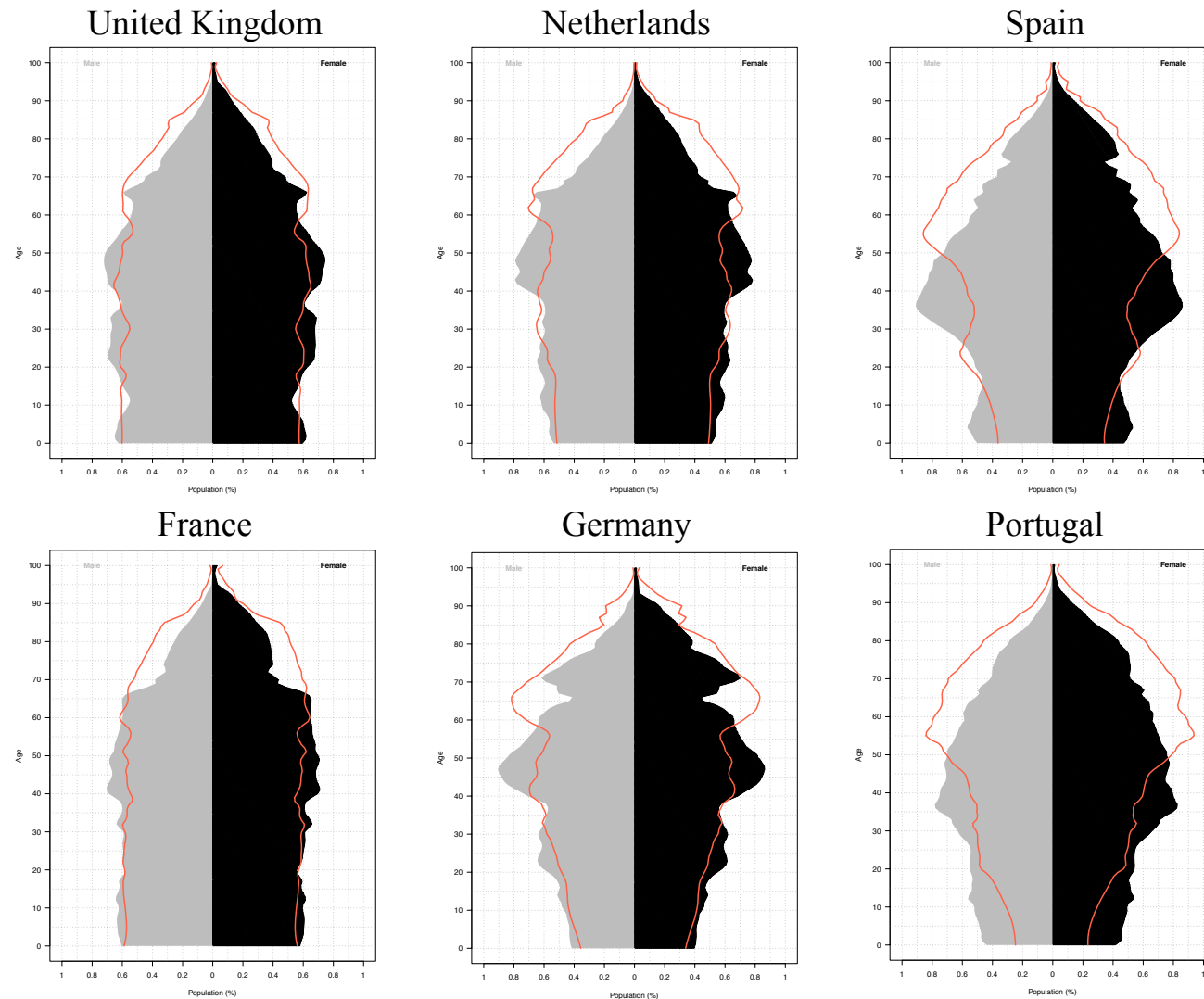
Source: Human Fertility Database and Human Mortality Database. Author's computation.

2. Theoretical framework and hyphotesis

Determinants of tourism demand

- **Determinants refer to the exogenous or external factors that shape the general demand for tourism** within society or a specific population (...)." Page and Connell (2006: 44).

- **Economic theory** limited to **income and price as main**. However, **noneconomic factors should also be considered** (Crouch, 1994). Cho (2010) stressed **the influence of noneconomic factors on tourism demand**.

- According to Saayman and Saaymam (2009), **socio-demographic variables can be used to explain travel behaviour. Tourists' socio-demographic characteristics can be included among the determinants** of the demand and heterogeneous consumer behaviour can be incorporated (Heckman, 2001).

- Lundberg (1990) **presented motivational factors related to determinants of tourism demand**, such as: landscape; culture; among others.

Travel decisions based on demographic factors

- **Decision to practise tourism** is also made in accordance **with the free/available time family of all/part family members**. (Medlik and Bukart, 1981).

- Despite a considerable amount of tourism demand studies, the **literature evidences a lack of discussion about the effects of demography on the future of tourism demand choice patterns** (Tiago et al, 2016; Yeoman et al, 2013; Yeoman et al, 2011).

- Over the past five years, only few authors examined these topics form a tourism based viewpoint, as indicated in table 1:

Table 1. Evidence of demography and tourism studies

Authors (Year)	Demographic variables	Unit of analysis
Tiago et al. (2016)	age; household size	European senior tourists
Bernini and Cracolici (2015)	age; household size	Italian households
Chen and Shoemaker (2014)	age; gender	American senior leisure tourists
Alén et al. (2014)	age	Spanish senior tourists
Szromek, Januszewska and Romaniuk (2012)	age; probability of death; average life expectancy at birth; number of deaths and births per 1000 population.	Spa visitors - Poland

Source: Authors' compilation

From increasing life expectancy to new patterns of international tourism demand

- **Demographic changes in modern societies have created a considerable amount of challenges for the development of tourism**, mainly due to their implications for tourism participation behaviour (UNWTO and ETC, 2010).

- **Key demographic issues** to analyse in terms of impact of such characteristics on tourism demand and travel behaviours are (Yeoman et al., 2013; Bernini and Cracollini, 2015, among others):
  - Ageing population
  - Increasing life expectancy
  - Household composition
  - Family structures
  - Travel companions
  - Population location and migration

Evolution of lifespan

- **As intricate interplay of advances in income, salubrity, nutrition, education, sanitation, and medicine** (…), results of large improvements in human health (Riley, 2001).

- Recently, **it has been the improvements in survival rated after the age 65 that contribute the most to lifespan extension** (Oeppen and Vaupel, 2002).

- **Demographic changes will also affect household structures and their dimension**. As a consequence these changes can influence households' travel and tourism choices.

- Recent senior tourism research, published by Tiago *et al.* (2016) examines the niche of **"grey" tourism (elderly tourists)**, through a market-segmented perspective and **suggested a group of different types of grey tourists in Europe**.

+ Hypotheses
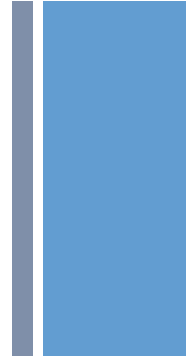
The European tourists aged +65 years old has chosen Portugal as the next main destination rather then other country. This declaration is based on the utility that the tourist receives from choosing Portugal compared the utility received from an alternative location. The choice underlying the utility defines the following hypotheses:

Hypotheses

Hypothesis 1 (Reasons to not travel): Reasons to not travel does not influence European tourists with more than 65 years old who intend to choose Portugal as the next main place of holidays.

Hypothesis 2 (Household composition): The household dimension does not influence European tourists with more than 65 years who intend to choose Portugal as the next main place of holidays.

Hypothesis 3 (Return intention reasons): Destination attributes does not influence the return intention of European tourists with more than 65 years who intend to choose Portugal as the next main place of holidays.

Hypothesis 4 (Information sources): Information sources do not influenced European tourists with more than 65 years who intend to choose Portugal as the next main place of holidays.

Hypothesis 5 (Nationality): European tourists with more than 65 years who intend to choose Portugal as the next main place of holidays are not characterized by their nationality.
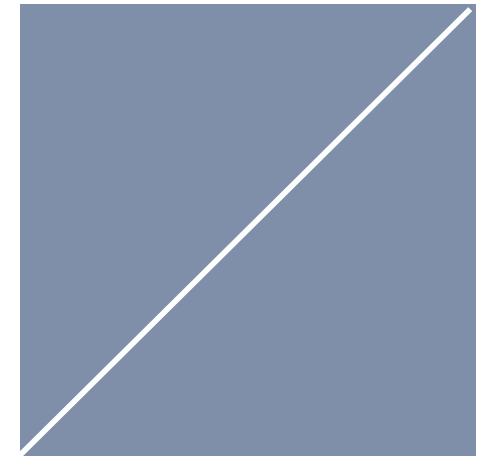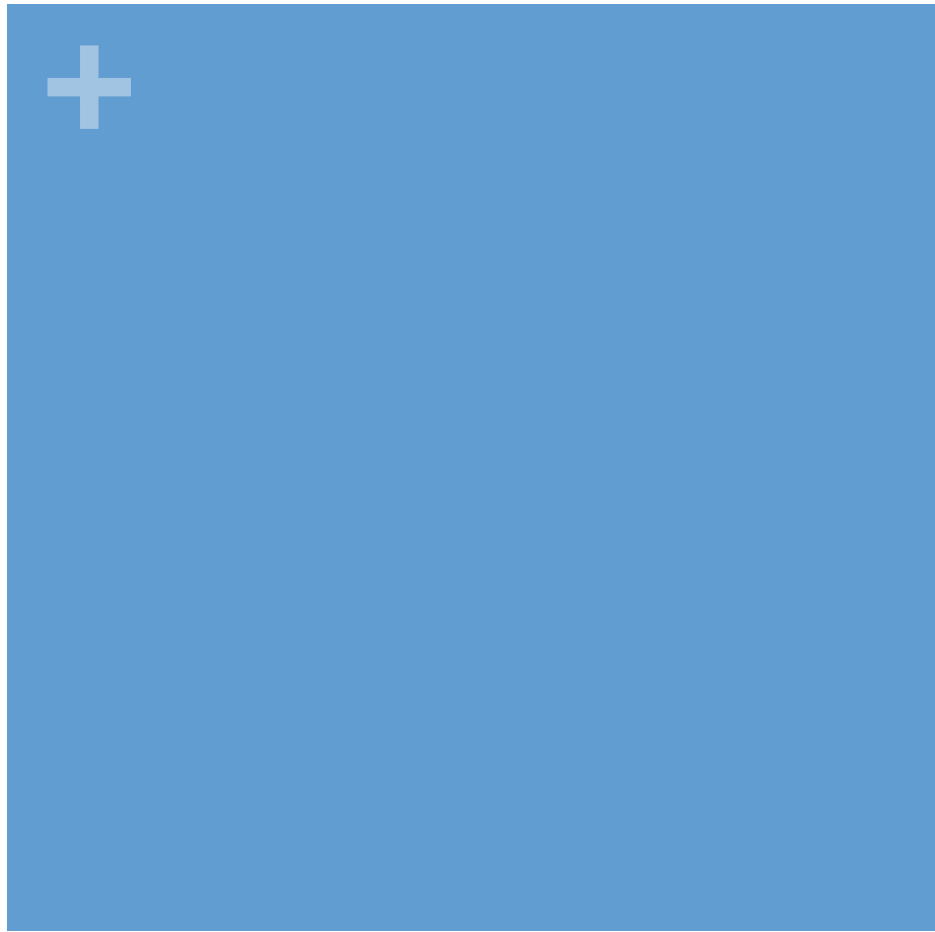
3. Methods

+ Sample

- **Data**
  - Population data and death counts were taken from the Human Mortality Database (http://www.motality.org)
  - Our focus was on the five most representative countries concerning tourism demand for Portugal (2013-2015): The United Kingdom, Germany, Spain, France, The Netherlands (contextual setting – exploratory).
  - Identification of sociodemographic characteristics of tourist demand, we used EUROBAROMETER reports and database on "Attitudes of Europeans towards Tourism" draw up in 2013, 2014 and 2015. Question were made regarding the previous year (2012, 2013, 2014) (contextual setting – exploratory).
  - Identification of determinants of European senior tourists, we used EUROBAROMETER reports and the same database, draw up 2014, regarding the previous year (2013) (logit model).

Model specification and estimation

- Since the main goal is to identify the determinants of European tourists with more than 65 years old who intend to choose Portugal as the next main country of holidays rather than other country, considering a number of characteristics, denoted by the vector $x_{i.}$

- A binary dependent variable y_i, that verifies $y_i = 1$ if the tourist are aged over 65 years old and chooses Portugal and $y_i=0$ otherwise, yields the aimed probability of $P(y_i = 1 \mid x_i)$.

The logit model has the following form:

Model specification and estimation

$$plus65\_PT = \beta_1 personal\_private + \beta_2 household\_structure + \beta_3 return\_motives + \beta_4 nationality + \beta_5 information\_source + \varepsilon_i$$

Where,

plus65_PT – represents the individuals (i) who declare be aged over 65 years old and have the intention to choose Portugal, next year, as the main destination for holidays, instead of other country (Yes=1; No=0)

personal_private – represents the individual's reasons to not travel

household_structure – represents number of people aged 15 years or more living in individual's household

return_motives - represents attributes of destination that motive individual's return back to the same place for a holiday

nationality – represents individual's nationality

information_source – represents individual's importance source of information when decided to travel

Model specification and estimation

- Assuming a model involving latent or unobserved variable (y*) that is related to the observed independent variables by the structural equation (Long and Freese, 2006)

$$y_i^* = x^i\beta + \varepsilon_i$$

- where *i* indicates the observation and ε is a random error. For one independent variable, we can simplify the notation to
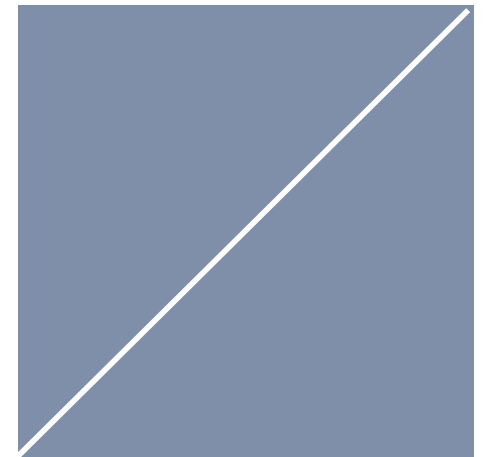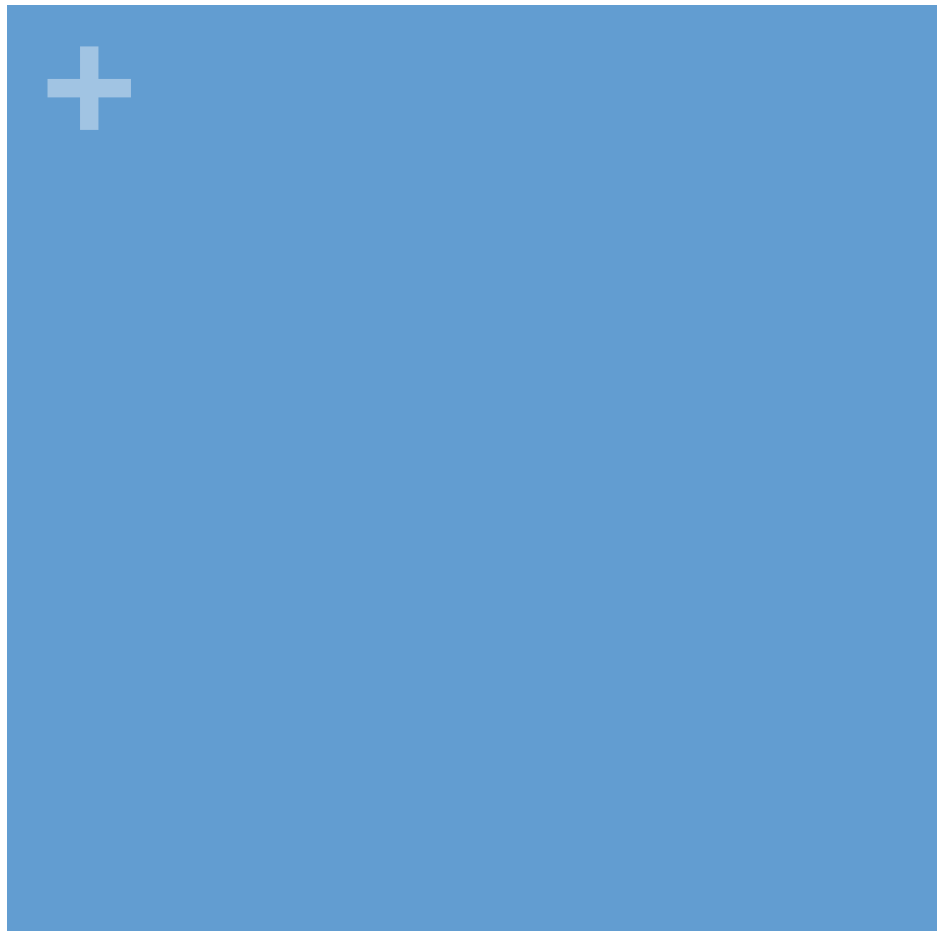
$$y_i^* = \alpha + \beta x_i + \varepsilon_i$$

- The observed binary *y* and the latent *y** is made with a simple measurement equation:

$$y_i = \begin{cases} 1 & \text{if } y_i^* > 0 \\ 0 & \text{if } y_i^* \leq 0 \end{cases}$$

Model specification and estimation

Plus65_PT	^ β	SE	z	P>z	Wald	[95% Conf.]	
personal_private	1.853	.5510133	3.36	0.001	11.31b	.7735103	2.933443
household_structure	-.621	.3426955	-1.81	0.070	3.98c	-1.293321	.0500205
return_reasons	1.029	.5182313	1.99	0.047	3.94a	.0133597	2.044789
Belgium	2.457	.9385227	2.62	0.009	6.85b	.6175384	4.29648
Denmark	2.278	1.200456	1.90	0.058	3.60a	-.0741185	4.631583
Finland	1.888	.9391677	2.01	0.044	4.04a	.0473389	3.728809
Ireland	3.636	.8089272	4.49	0.000	20.20b	2.050579	5.221516
Italy	2.012	.9399297	2.14	0.032	4.58a	.1702773	3.854734
Spain	2.054	.9451991	2.17	0.030	4.72a	.2019213	3.907034
Sweden	2.092	1.180799	1.77	0.076	3.14c	-.2213729	4.407275
info_internet	-1.916	1.046986	-1.83	0.067	3.35c	-3.968483	.1356278
info_TAGVTO	1.194	.5424742	2.20	0.028	4.85a	.1316682	2.258128
_cons	-6.976	1.024307	-6.81	0.000	46.40b	-8.984584	-4.969374

	Statistic	p-val.
LogLikelihood	-78.573	
Pseudo R2	0.2901	.0000
LR Chi2	64.20	
GOF (Hosmer e Lemeshow test)	4.52	.8074

a Statistically significant at 5%; b Statistically significant at 1%; c Statistically significant at 10%

4. Results

Hypothesis	Result	
H1 (Reasons to not travel to Portugal)	rejected	the propensity to not travel among the European tourists aged plus 65 (Portugal) is higher explained by personal and private reasons.
H2 (Household composition)	rejected	the probability of these tourists choosing Portugal is related to the composition of household elements (signal is negative). Tourists with less household elements evidenced a higher probability to choose Portugal to go on holidays.
H3 (Return intention reasons)	rejected	the probability of European senior tourists returning to Portugal is strongly explained from a stronger valorization of culture attributes.
H4 (Information sources)	rejected	the less importance internet information source, European senior tourists consider, the less probability these tourists go on holidays to Portugal. In the case of Travel Agents and Tour Operators the more importance they are the higher is the probability to choose Portugal to go on holidays.
H5 (Nationality)	*rejected*	results suggest that Senior European tourists from countries such as, Belgium, Scandinavia, Ireland, Italy and Spain evidenced a higher probability to choose Portugal to go on holidays.
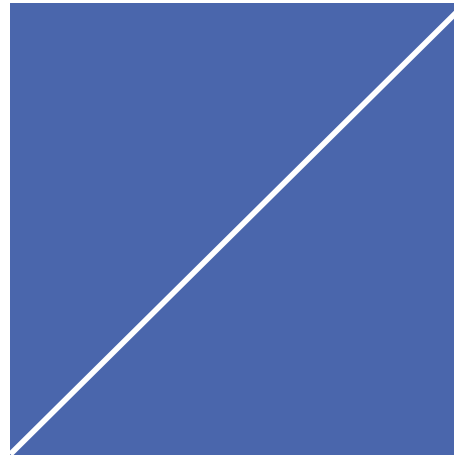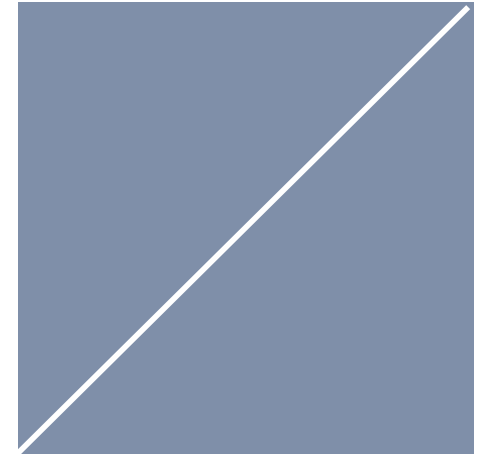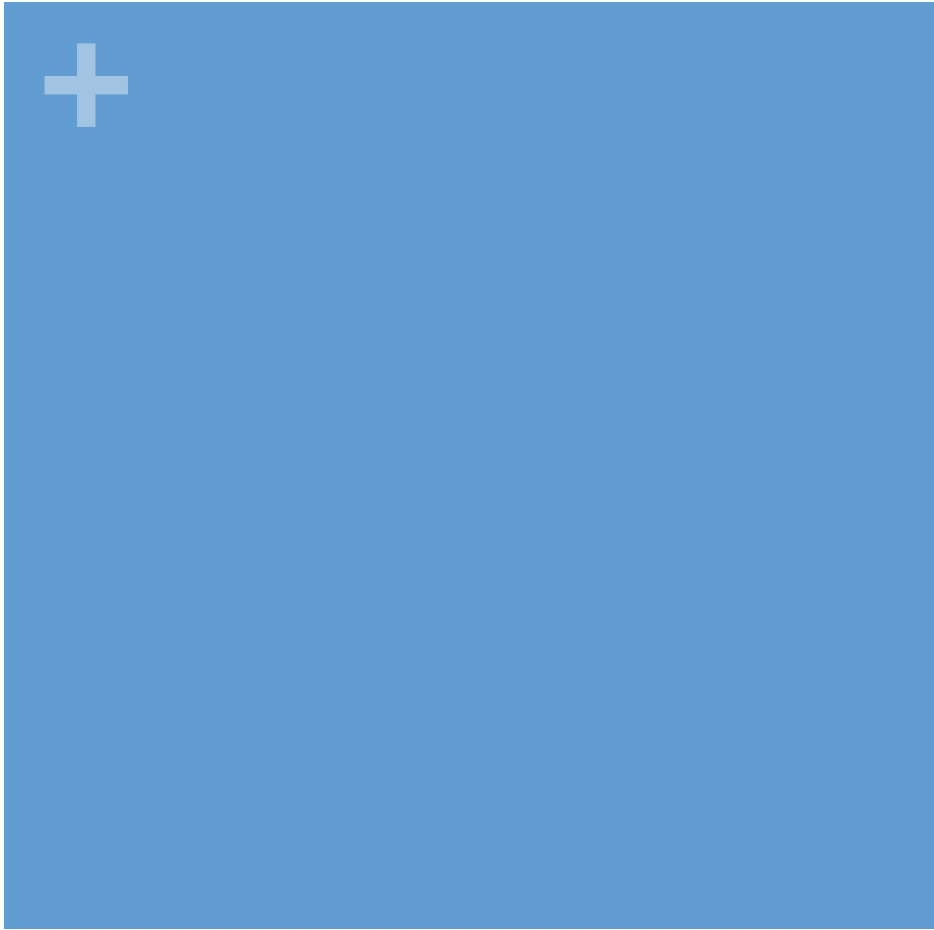
5. Conclusions and implications

Conclusions and implications

- Since **Demographic changes** that are resulting in extreme ageing in all developed countries **claim for an urgent need to re-adaptation of tourism supply in order to be able to keep the competitiveness of destinations**.

- Since the **household size are mainly composed by two individuals** and they live longer and healthier, spending longer time in retirement and with more free time to enjoy life, **it is expected that more older couples be seen traveling for leisure proposes.**

- Nevertheless, **younger tourists should not be forgotten** and in order to keep being attractive to this kind of demand, like Spanish or even Dutch tourists.

- The traditional mature international markets of Portugal, seems to evidencing socio-demographic patterns that challenged all the tourism national strategy for the next 20 years.

Conclusions and implications

- **The demographic projections combined with the tendency of repeat-buying behaviour and the long steady relation with Portugal revealed by mature and emerging markets with Portugal** (Correia, Serra and Andres, 2016) **seems to gain a paramount of importance considering trends in tourists demand patterns, mainly in the segment of SENIOR TOURISTS...**

- This research is an exploratory study, the intention is not to obtain definitive results for direct use by tourism industry. Rather, as consequence of this highly involved with Portugal, **it is suggested that tourists' information should meets the interest of more elderly markets**, which in suggesting an update of marketing programs target to senior citizens, as suggested by Chen and Shoemaker (2014).

- **Limitations** open new paths for further research. **Methodologically** this research is based on secondary data, regarding to answer to different purposes. For **future research**, the model should be compared among others, in order to assess the more effective and consistent in terms of estimation, testing and GOF.

+ Thanks for your attention!

TIME FOR QUESTIONS ?

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