Development of cultural tourism and wellbeing of urban residents

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Abstract

Many cities consider development of cultural tourism as opportunity to sustain employment and economic growth of the area. However, increasing tourists' flows affect local economies and lives of local residents in a number of ways not excluding negative effects. Careful consideration of benefits and pitfalls of cultural tourism development is necessary in order to sustain balanced urban development. In the present paper we evaluate experience of tourism development in 11 German cities – capitals of German cultural tourism. Our analysis is focused on the effect of cultural tourism on the wellbeing of urban residents. To address this issue we study the effect of tourists' arrivals to the centers of cultural tourism on the satisfaction with life of urban residents. Based on the results of the study we suggest policy implications for the development of cultural tourism that leads to improvements of quality of life of locals.

Keywords: cultural tourism, urban residents, quality of life, tourism impact

Cultural tourism development is a strategy being chosen by many urban centers in order to stimulate economic development and employment in the era of manufacturing relocation to cheap labor countries. Tourism development is associated with creation of new jobs, income generation, infrastructure development, and cultural life boost in the destination. However, tourism growth leads to costs for the local community such as traffic congestion, increase in the cost of living in the area, lost of local identity and authenticity, pollution, etc. (for a review Harril, 2004; Sharpley, 2014). Politicians aiming at increasing of local residents' wellbeing through cultural tourism development should conduct a careful examination of costs and benefits related with tourism expansion.

The majority of studies dealing with tourism influence on lives of residents investigated perception of or attitude toward tourism (Sharpley, 2014). These studies provide a measure of general acceptance of tourism development but fail to provide insight for decision-makers on whether tourism expansion leads to residents' wellbeing enhancement. A possible way of studying influence of tourism on life of locals is to study the effect of tourism on subjective wellbeing measures. These measures like satisfaction with life, happiness or quality of life, received recent attention by

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economists for their capacity to reflect a more broader measure of individual subjective welfare than the one provided by standard measures like GDP, employment rate, crime rate and others (Stiglitz et al., 2009).

The present study addresses the issue of the impact of cultural tourism on life of urban residents. We study impact of cultural tourism on the wellbeing of residents on the example of 11 German cities defined by German National Tourism Board as centers of cultural tourism. These cities are Berlin, Hamburg, Düsseldorf, Dresden, Hannover, Nurnberg, Leipzig, Munich, Frankfurt, Stuttgart and Cologne. Tourist arrivals to these cities in 2012 accounted for 24% of total tourism flows in Germany and 39.4% of total international visitors' arrivals. Tourists' arrivals to these cities increased by 17% over the period from 2006 to 2011.

Our investigation is based on data from German socio-economic panel database (GSOEP). GSOEP each year conducts interviews with representative panel of German residents asking them to indicate their satisfaction with life in the current year together with collecting a whole range of socio-economic characteristics. In total GSOEP includes around 40,000 households in the panel. The present study is limited to the analysis of 5,436 individuals who reside in the analyzed cities during a period from 2006 to 2011. The study is based on the analysis of 27,180 individual responses, where for each individual in the panel we observe responses for each year under analysis. Data from GSOEP is enriched by regional statistics on tourists' arrivals.

The present analysis constitutes a unique insight into the relationship between cultural tourism and urban development. Being based on representative sample of residents from 11 cities its results can be extended to the whole urban population in these cities and thus constitute an important insight for tourism research and policy makers. It is a first study that combines investigation of several cities in the same country. This analysis permits to confront different approaches to cultural tourism development unique to each city leaving most of the other significant variables like general policy or economic development comparable being defined nationally.

Background

Evaluation of the impact of tourism on life of residents is an important topic for tourism research demonstrated by a plethora of studies conducted on this topic over the last several decades. A number of literature reviews have been conducted in order to provide a systematic account of the research done so far. From these reviews emerges that the majority of studies investigating the impact of tourism on residents' lives elicit perceptions of locals about the development of tourism in the destination and its impact on their life (Sharpley, 2014). This type of analysis informs on the

level of acceptance of tourism development in the area but fails to provide insight into whether tourism expansion benefits residents or harms them.

The main focus of this research lies in determining individual characteristics that influence this acceptance. Among them are often found household economic dependency on tourism, proximity of residence to tourism area, property ownership, length of residence, demographic characteristics. Except for economic dependency on tourism the considered determinants present contradictory influence on the studied phenomenon (Harril, 2004; Sharpley, 2014). The reason for this lies in the fact that most studies are designed as case studies investigating one particular tourism destination characterized by its stage of development, history, tourists' profile, seasonality and others. Although some studies consider several destinations within one country (Kim et al., 2013) or compare destinations in several countries (Tosun, 2002), they fail to provide a unique comparable base between analyzed destinations and hence their results are of little validity for other destinations.

The studies based on perception of tourism impact typically investigate the impact of tourism on objective measures of welfare like income increase, creation of new jobs, pollution, crime rates, etc. Objective measures, however, are able to capture only partially the aspects of life that contribute to welfare (Kahneman and Sugden, 2005). Recently, economists moved their attention to adoption of subjective well-being measures that capture overall welfare of individuals. Some research, i.e. Kim et al. (2013), overcome this limitation by introducing a measure of quality of life into investigation of the impact of tourism. However, these studies suffer from other imperfections like limited validity of analyzed destinations, convenience sampling, considering one moment at a time.

While tourism development implies dynamic changes in the state of tourism, the studies investigating impact of tourism development neglect the dynamic nature embedded in tourism (Sharpley, 2014). Due to the limited resources for data collection most studies are restricted to the use of cross-section data that provide an instant picture of the situation failing to reproduce the dynamics of getting to this state. As a consequence these studies inform on the perception of tourism by residents at a certain moment of destination development leaving apart the dynamics of this perception. As such these studies add little new on how the perception of tourism is changing with tourism development.

The present study overcomes some of these limitations. First of all, instead of separately considering the impact on economic, social, cultural and environmental life of residents it considers satisfaction with life as an overall measure of wellbeing of residents. The aim of the study is to

investigate if more intense tourism flows improve satisfaction with life of urban residents. Analysis incorporates a representative sample of residents in German cities affected by cultural tourism. The investigation includes residents in 11 cities. It allows comparing of residents wellbeing in urban areas characterized by intense tourists' flows with residents of cities that faced lower tourism development. Finally, the dynamic nature of tourism is considered through investigation of residents' wellbeing and tourism flows over 5 years. It permits to track the changes in residents' wellbeing in relation to tourists' presence at destination that varies over years.

Methodology

The dependent variable is the satisfaction with life of individuals (SatLife). It is an indicator variable that assumes the mutually exclusive values $j=0,1,2,...,10$. On scale 0-low to 10-high level satisfaction with life. Under these conditions the correct model to use is given by the ordered multinomial logit regression model (Cameron and Trivedi, 2005)[4].

To define the model consider the following single latent variable model:

$$\text{SatLife}_i^* = x_i'\beta + u_i,$$

$$[1]$$

the dependent variable SatLife* is continuous and crosses the set of unknown thresholds $\alpha_j s$ –to be estimated– that define the categories of our dependent variable. Formally we have:

$$\text{SatLife} = j \text{ if } \alpha_{j-1} < \text{SatLife}^* < \alpha_j \qquad [2]$$

Where $\alpha_0 = -\infty$ and $\alpha_{11} = +\infty$.

The probability that an individual has an index of satisfaction with life equal to j is given by:

$$\text{Pr}(\text{SatLife}=j)=\text{Pr}(\alpha_{j-1}<\text{SatLife}^*<\alpha_j)=$$

$$=F(\alpha_j - x_i'\beta)\text{-}F(\alpha_{j-1} - x_i'\beta)=\frac{e^{\alpha_j-x_i'\beta}}{1+e^{\alpha_j-x_i'\beta}}-\frac{e^{\alpha_{j-1}-x_i'\beta}}{1+e^{\alpha_{j-1}-x_i'\beta}} \qquad [3]$$

Where the last expression refers to the ordered logit specification of the distribution of errors u_i (F(.)).

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[4] It is also possible to use an ordered multinomial probit model. Results obtained using this model are similar to the ones reported and discussed in the paper. Tables are available on request to the authors.

The model is estimated using the maximum likelihood method. Moreover, in the estimation we use robust variance estimation that helps to correct for heteroskedasticity.

Note that the estimated coefficients $\boldsymbol{\beta}$ provide information about the sign of the relationship between the latent dependent variable y* and the regressors. To recover the marginal effects on probabilities we should consider:

$$\frac{\partial \Pr\,(\text{SatLife}_i = j)}{\partial x_i} = [F(\alpha_j - x_i'\boldsymbol{\beta}) - F(\alpha_{j-1} - x_i'\boldsymbol{\beta})]\boldsymbol{\beta} \qquad [4]$$

the equation [4] gives the changes in the probability of having a satisfaction with life equal to j for a unit change in the regressors. In particular, if we select from the vector the variable of interest represented by the tourism intensity $-x_i' = tourint_i-$ we can study the changes in the satisfaction with life of individuals given by a unit change in the tourism intensity of a region.

Data

The database we employ for the analysis is the result of the merge of the waves of the SOEP survey corresponding to the period from year 2006 to 2011. In particular, we built a balanced panel, i.e. we select a subsample of individuals present in all the waves in the time period under analysis and we follow them through time. The longitudinal nature of the database obtained with this procedure allows us to exploit not only the cross section but also the time series variability of the variables involved into the study.

This data was enriched by regional data on arrivals of tourists obtained from regional statistics. Due to availability of data we conduct our analysis on regional policy regions (ROR). In the case of Berlin and Hamburg these regions correspond to the city, while in all other cases neighborhood to the city areas are also included in the analysis. In total the empirical analysis in the study is based on 27,180 observations collected over 5,436 individuals during the analysed period of 5 years.

German magic cities as destination

The present study takes into analysis 11 German magic cities defined by German National Tourism Board as centers of cultural tourism. These cities are Berlin, Hamburg, Düsseldorf, Dresden, Hannover, Nürnberg, Leipzig, Munich, Frankfurt, Stuttgart and Cologne. The analyzed cities differ significantly by the presence of tourists on their territory. Berlin is a leading touristic city in

Germany attracting 11 mln visitor's annually, 7% of overall tourists arrivals in Germany. Berlin, Hamburg and Munich altogether account for 60% of all tourists visiting cultural cities. The cities with the least arrivals are Hannover and Leipzig counting each on more than 1 mln annual visitors. Cultural cities account for 39.4% of international visits to Germany. The most visited cities by international tourists, Berlin, Munich and Frankfurt, together account for 65% of all international arrivals to magic cities.

Munich is the city with the most visitors per capita, 2.86 tourists' arrivals per resident in the analyzed period (Figure 1). The city with the least intensity of tourists, Düsseldorf, account for 1.17 tourists per resident annually. The city that experienced highest growth of tourists' arrivals per capita is Hannover, where tourists' arrivals per capita grew by 53% in the 5 years under analysis (Figure 2). The city with the lowest increase in tourists per capita during the analyzed period is Dresden with 7% growth.

Results

Table 1 presents the results of estimation of benchmark model. Empirical research in quality of life reports a number of variables that affect satisfaction with life. In order to purify impact of tourism on wellbeing of residents from confounding effect of other variables like employment opportunities or income level we include controls for these variables. GSOEP database collects a rich set of socio-economic variables that permits to include such controls in our regression.

Our results are in line with other studies on quality of life in Germany (Ferrer-i Carbonell, 2005; Winkelmann and Winkelmann, 1998). Thus, our results indicate that being female, being healthy and having higher income are positively correlated with wellbeing. Life satisfaction is negatively affected by being unemployed. Satisfaction with life follows U-shaped behaviour, meaning that wellbeing decreases into an age of 40-45, and then gradually increases again (Frey and Stutzer, 2002; Dolan et al., 2008).

Visitors' arrivals per resident influences satisfaction with life of residents in a significant way and it have positive relation (Table 1, Model 1). It means that increase in tourism density with respect to native population increases satisfaction with life of residents. This result indicates that development of cultural tourism in German magic cities has positive effect for individuals who live in touristic areas.

Next, we investigate the effect of domestic and international tourism on residents' satisfaction with life (Table 1, Model 2). Cultural city tourism to magic cities accounts for 39.4% of total international visitors to Germany. We decompose aggregate tourism density into domestic and international component and include both of them into the regression. We find that coefficient

relative to international tourists density is positive and significant. It is almost 4 times larger than the coefficient for total tourists' density. At the same time coefficient relative to domestic tourism is negative but not significant. This result suggests that the increase in satisfaction with life associated with tourism is driven by the presence of international tourists. Arrivals of domestic tourists have less pronounced effect of quality of life of residents.

Development of cultural tourism in cities under analysis was not homogeneous. We distinguish among cities with high growth of tourists' density and low growth. The group of high growth cities is composed of Hannover, Berlin, Hamburg, Düsseldorf and Munich (Figure 2). In this group the presence of tourists in proportion to local population during the period of analysis grew by 34% on average. The rest of the cities experienced relatively lower growth averaging 14% growth in visitors per resident. Table 2 present the results of regression for the two groups. The presence of tourists has positive effect for residents of both groups of cities. However, the corresponding coefficient associated with lower growth group is higher compared to the one of the higher growth group. This evidence suggests that it is more beneficial for residents to avoid rapid pace of tourism development. Local residents need time to get used to the increasing presence of tourists.

Given the role of international tourism we investigate the effect of growth of international visitors per resident. We divide the cities under analysis into 2 groups. In the first group we include cities with the highest growth of international visitors (Figure 3). This group experienced an average increase of 36% over the analyzed period and is composed of Hannover, Berlin, Hamburg, Dresden and Düsseldorf. The second group corresponds to cities where the growth in international arrivals with respect to local population averaged 12% during the period of interest. Table 3 reports the results of estimation over the two groups. For both groups the coefficient corresponding to visitors' arrivals is highly significant and positive. It confirms that increase in the presence of tourists has positive effect on residents' satisfaction with life. However, the coefficient relative to the lowest growth group is higher than for the highest growth groups. This suggests that also with respect to international tourism too rapid growth is less beneficial for residents' wellbeing.

Discussion and conclusions

The present study addresses the impact of cultural tourism development in cities on wellbeing of local residents. We address this question through analysis of tourists flows to 11 German cities defined by German Tourism Board the capitals of cultural tourism. We relate the presence of tourists to satisfaction with life of local residents. Our analysis is based on panel data permitting to follow evolution of wellbeing of residents and tourism flows over 5 consecutive years. This study is

the first example of analysis of longitudinal data in order to measure tourism impact on wellbeing of residents.

Data on wellbeing of local residents collected by GSOEP provides a general overview on the wellbeing of representative sample of German citizens. This reinforces our results of positive relationship between residents' wellbeing and growth of tourism. It means that tourism creates wellbeing not only for individuals directly interacting with tourists (these individuals are typically analyzed in tourism literature) but it adds value for all people living in the neighborhood of tourism areas.

The object of our analysis is satisfaction with life of residents. Recent developments in economics suggest that pure economic indicators are not sufficient to measure national growth. The notion of quality of life as a more general indicator of wellbeing of citizens is spreading among governments in order to quantify national advancement. Thus, OECD and World Bank use data on quality of life to track progresses of countries for which GDP and other economic measures were ones used.

In the present study we find that the growth in tourism flows, in particular, the growth of visitors per resident has significant positive effect on wellbeing of residents. However, this growth needs to be slowly paced. As our results indicate a rapid growth in the presence of tourists leads to lower increases in residents' wellbeing. This may happen because increased presence of tourists brings change for a local resident with respect to the regular functioning without tourists (status quo). Research in psychology shows that people experience difficulty in accepting change in status quo. Adjusting to change takes time and the larger is the change the more difficult is adjustment it. For this reason we may observe losses in perceived wellbeing with higher levels of change. Our results indicate that in order to preserve residents wellbeing cultural tourism development within urban context should be gradual.

International tourism is often seen as driver of tourism development. Our analysis finds a strong positive effect of the presence of international tourists on local residents' wellbeing while domestic tourism has a negative sign with non-significant coefficient. This result indicates that development of international cultural tourism is responsible for the overall positive effect of tourism on quality of life of urban residents. However, policy makers need to pay special attention to the pace of development of international tourism as the effect of the increase in residents' wellbeing decreases with higher growth rates of international arrivals to the analyzed cities.

References

Butler, R. (1980). The concept of a tourism area cycle of evolution. Canadian Geographer, 24(1), 5-12.

Cameron, A.C. and Trivedi, P.K. (2005) Microeconometrics: Methods and Applications Cambridge University Press

Dolan, P., T. Peasgood, and M. White (2008). Do we really know what makes us happy? A review of the economic literature on the factors associated with subjective well-being. Journal of Economic Psychology 29(1), 94–122.

Ferrer-i Carbonell, A. (2005). Income and well-being: An empirical analysis of the comparison income effect. Journal of Public Economics 89 (5–6), 997–1019.

Frey, B. and A. Stutzer (2002). What can economists learn from happiness research? Journal of Economic Literature 40(2), 402–435.

Harrill, R. (2004). Residents' attitudes toward tourism development: a literature review with implications for tourism planning. Journal of Planning Literature, 18(3), 251e266.

Kahneman, D. and R. Sugden (2005). Experienced utility as a standard of policy evaluation. Environmental and resource economics 32 (1), 161–181.

Kim, K., Uysal, M., & Sirgy, J. (2013). How does tourism in a community impact the quality of life of community residents? Tourism Management, 36, 527e540.

Sharpley, R. (2014) Host perceptions of tourism: A review of the research, Tourism Management, Volume 42, June, Pages 37-49

Stiglitz, J., A. Sen, and J. Fitoussi (2009). Report by the commission on the mea- surement of economic performance and social progress. Accessed on 4 September 2014 at: http://www.stiglitz-sen-fitoussi.fr/en/index.htm.

Tosun, C. (2002). Host perceptions of impacts: a comparative tourism study. Annals of Tourism Research, 29(1), 231-253.

Vargas-Sánchez, A., Porras-Bueno, N., & Plaza-Mejía, M. (2011). Explaining residents

Wall, G., & Mathieson, A. (2006). Tourism: Changes, impacts, and opportunities. New York: Pearson Prentice Hall.

Winkelmann, L. and R. Winkelmann (1998). Why are the unemployed so unhappy? Evidence from panel data. Economica 65 (257), 1–15.

Table 1: The determinants of Satisfaction with life, Random effects ordered logistic model. Robust standard error reported.

indep. Vars	(1)	(2)
Visitors arrival per resident	0.2598***	
	(0.069)	
Domestic visitors arrival per resident		-0.1811
		(0.195)
International visitors arrival per resident		1.0382**
		(0.404)
Age	-0.0544***	-0.0550***
	(0.008)	(0.008)
Age squared	0.0007***	0.0007***
	(0.000)	(0.000)
Household Size	-0.0666***	-0.0592***
	(0.018)	(0.020)
Satisfaction with health	0.5409***	0.5425***
	(0.010)	(0.010)
Household income	0.0001***	0.0001***
	(0.000)	(0.000)
Personal income	0.0000*	0.0000
	(0.000)	(0.000)
Time spent at work	-0.0035**	-0.0040**
	(0.002)	(0.002)
Self employed	-0.1057	-0.0533
	(0.098)	(0.103)
Female	0.1543***	0.1507***
	(0.038)	(0.040)
intermediate school	-0.3317***	-0.2229*
	(0.123)	(0.135)
Technical school	-0.1941	-0.0807
	(0.120)	(0.132)
upper secondary school	-0.0773	0.0236
	(0.134)	(0.146)
other degree	-0.0506	0.0365
	(0.116)	(0.128)
no school degree (drop out)	-0.2918**	-0.1843
	(0.134)	(0.147)
currently in school	-0.4059***	-0.2197
	(0.157)	(0.170)
married	0.4145	0.4513
	(3.222)	(3.195)
married separated	0.0118	0.0888
	(3.224)	(3.197)
single	0.0701	0.1209

	(3.221)	(3.194)
divorced	0.0482	0.1231
	(3.222)	(3.196)
widowed	0.0477	0.0851
	(3.223)	(3.196)
part time employee	0.1914**	0.2189**
	(0.094)	(0.102)
vocational training	0.1282*	0.1399*
	(0.074)	(0.080)
marginal part time employee	0.1483	0.1698
	(0.137)	(0.154)
unemployed	-0.0055	-0.0093
	(0.077)	(0.086)
military	0.2332	0.1928
	(0.185)	(0.235)
community service	-0.3009	-0.0654
	(0.498)	(0.567)
sheltered workshop	0.0617	0.1420
	(0.379)	(0.372)
not employed	0.4818	0.4262*
	(0.341)	(0.237)
201b.ror	0.0000	0.0000
	(0.000)	(0.000)
307.ror	-0.0931	-0.2149*
	(0.113)	(0.125)
508.ror	0.0528	-0.3475*
	(0.117)	(0.200)
510.ror	-0.2085**	-0.5289***
	(0.105)	(0.172)
604.ror	-0.2291***	-0.6768***
	(0.082)	(0.217)
810.ror	0.0240	-0.2697*
	(0.112)	(0.159)
906.ror	-0.1406	-0.4426**
	(0.114)	(0.175)
910.ror	-0.3085***	-0.8507***
	(0.087)	(0.287)
1101.ror	-0.4621***	-0.9230***
	(0.081)	(0.238)
1401.ror	-0.6524***	-0.4763***
	(0.099)	(0.134)
1404.ror	-0.3196***	-0.4327***
	(0.111)	(0.126)
cut1	-3.2170	-3.6059
	(3.237)	(3.213)
cut2	-2.2670	-2.6635
	(3.235)	(3.211)

cut3	-1.2593	-1.6086
	(3.234)	(3.210)
cut4	-0.3243	-0.6668
	(3.235)	(3.210)
cut5	0.3945	0.0507
	(3.235)	(3.211)
cut6	1.5862	1.2164
	(3.235)	(3.211)
cut7	2.4022	2.0302
	(3.235)	(3.211)
cut8	3.6711	3.3034
	(3.235)	(3.211)
cut9	5.6209*	5.2500
	(3.235)	(3.211)
cut10	7.3662**	6.9956**
	(3.235)	(3.211)
Observations	27,181	21,638

Robust standard errors in parentheses
*** $p<0.01$, ** $p<0.05$, * $p<0.1$

Table 2: **The determinants of Satisfaction with life in high *vs* low growth of tourism German cities. Random effects ordered logistic models. Robust standard error reported.**

indep. Vars	High growth cities	Low growth cities
Visitors arrival per resident	0.2115***	0.4749***
	(0.074)	(0.178)
Age	-0.0618***	-0.0469***
	(0.011)	(0.011)
Age squared	0.0008***	0.0006***
	(0.000)	(0.000)
Household size	-0.0497*	-0.0838***
	(0.026)	(0.026)
Satisfaction with health	0.5299***	0.5527***
	(0.014)	(0.014)
Household income	0.0001***	0.0001***
	(0.000)	(0.000)
Personal income	0.0001*	0.0000
	(0.000)	(0.000)
Time spent at work	-0.0049**	-0.0024
	(0.002)	(0.003)
Self employed	-0.2212*	0.0252
	(0.131)	(0.145)
Female	0.1064**	0.2033***
	(0.054)	(0.053)
dummies school leaving degree	Y	Y
dummies marital status	Y	Y
dummy employment status	Y	Y
dummies ROR	Y	Y
cut1	-3.3674	-2.6913***
	(3.241)	(0.459)
cut2	-2.4903	-1.6642***
	(3.238)	(0.434)
cut3	-1.4627	-0.6744
	(3.236)	(0.424)
cut4	-0.5865	0.3197
	(3.237)	(0.422)
cut5	0.1157	1.0561**
	(3.237)	(0.422)
cut6	1.3306	2.2306***
	(3.237)	(0.422)
cut7	2.1268	3.0674***
	(3.237)	(0.422)
cut8	3.3466	4.3858***
	(3.238)	(0.424)
cut9	5.3207	6.3184***

	(3.237)	(0.426)
cut10	6.9959**	8.1370***
	(3.238)	(0.426)
Observations	13,017	14,164

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 3 The determinants of Satisfaction with life in high *vs* low growth of international tourism German cities. Random effects ordered logistic models. Robust standard error reported.

indep. Vars	(1) high growth cities	(2) low growth cities	(3) high growth cities	(4) low growth cities
		growth of international tourism		
International visitors arrival per resident	0.5870*	0.9525**		
	(0.301)	(0.391)		
Visitors arrival per resident			0.1987**	0.3741***
			(0.082)	(0.130)
Age	-0.0711***	-0.0436***	-0.0743***	-0.0404***
	(0.013)	(0.011)	(0.013)	(0.010)
Age squared	0.0008***	0.0006***	0.0009***	0.0006***
	(0.000)	(0.000)	(0.000)	(0.000)
Household size	-0.0679**	-0.0595**	-0.0663**	-0.0718***
	(0.031)	(0.025)	(0.029)	(0.024)
Satisfaction with health	0.5241***	0.5558***	0.5189***	0.5570***
	(0.016)	(0.014)	(0.015)	(0.013)
Household income	0.0001***	0.0001***	0.0001***	0.0001***
	(0.000)	(0.000)	(0.000)	(0.000)
Personal income	0.0000	0.0000	0.0000	0.0001*
	(0.000)	(0.000)	(0.000)	(0.000)
Time spent at work	-0.0045	-0.0038	-0.0038	-0.0037
	(0.003)	(0.003)	(0.003)	(0.002)
Self employed	-0.1113	-0.0249	-0.1900	-0.0467
	(0.159)	(0.136)	(0.152)	(0.129)
Female	0.1018*	0.1855***	0.1224**	0.1742***
	(0.061)	(0.054)	(0.058)	(0.050)
dummies school leaving degree	Y	Y	Y	Y
dummies marital status	Y	Y	Y	Y
dummies employment status	Y	Y	Y	Y
dummies ROR	Y	Y	Y	Y
cut1	-3.9712	-2.5467***	-3.8202	-2.4583***
	(3.546)	(0.405)	(3.616)	(0.403)
cut2	-3.0321	-1.6003***	-2.8404	-1.5270***
	(3.540)	(0.382)	(3.611)	(0.383)
cut3	-1.9358	-0.5714	-1.8038	-0.5379
	(3.537)	(0.371)	(3.610)	(0.372)
cut4	-1.0321	0.4002	-0.9218	0.4388
	(3.536)	(0.369)	(3.609)	(0.369)
cut5	-0.3058	1.1146***	-0.1913	1.1522***
	(3.538)	(0.370)	(3.610)	(0.369)
cut6	0.9224	2.2384***	1.0641	2.3005***
	(3.538)	(0.370)	(3.610)	(0.369)
cut7	1.7213	3.0652***	1.8638	3.1311***

	(3.538)	(0.371)	(3.610)	(0.369)
cut8	2.9914	4.3439***	3.1151	4.4167***
	(3.538)	(0.373)	(3.610)	(0.371)
cut9	5.0121	6.2461***	5.1399	6.3226***
	(3.538)	(0.376)	(3.610)	(0.373)
cut10	6.7094*	8.0240***	6.8092*	8.1188***
	(3.538)	(0.378)	(3.611)	(0.374)
Observations	9,043	12,595	11,332	15,849

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Figure 1. Tourists arrivals per resident, average over period 2006-2011
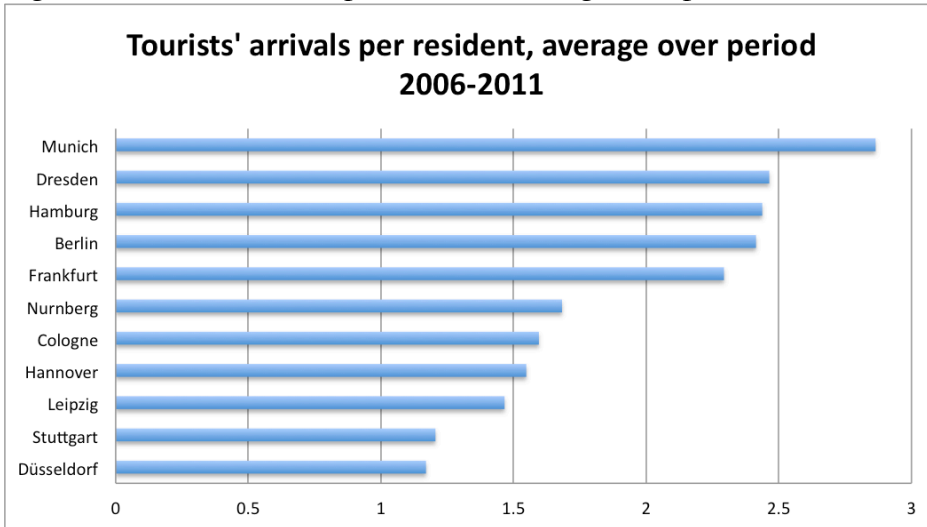

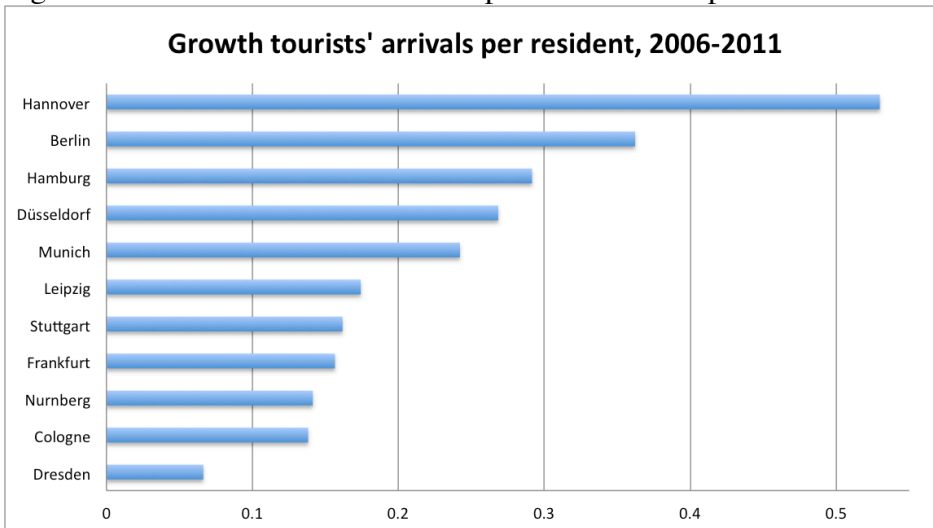Figure 2. Growth of tourists' arrivals per resident over period 2006-2011

Figure 3. Growth of international visitors per resident over period 2007-2011