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Croatia's Tourism Industry: Beyond the Sun and Sea

By Kristian Orsini and Vukašin Ostojić

Summary

With its advantageous location and natural beauties, Croatia has been an important tourist destination ever since the surge of large-scale international tourism. The wars in former Yugoslavia of the early 90s severely affected both international demand and the tourist infrastructure, but in the past 20 years tourism has been on the rise again. International tourists' expenditure in Croatia amounts to almost 20% of GDP – by far the largest share in the EU. Croatia features a typical "sea and sun" tourism model with stays concentrated in coastal areas in the summer months. The accommodation offer is skewed towards relatively cheap structures (such as private vacation houses and camping grounds) and average tourist spending is below that recorded in EU peers.

Structural differences in tourism models across countries are typically reflected in a different sensitivity of demand for tourism services to income and prices. We estimate the international tourism demand for Croatia and three other Mediterranean destinations using a comparable specification where demand is modelled as a function of purchasing power in the EU, the relative price of tourism services and travel costs for each country. We find evidence that the international demand for Croatian tourism is more income elastic than for other Mediterranean destinations. Our findings confirm that tourism demand can be extremely sensitive to prices, although Croatia features the lowest price elasticity among the countries considered. Tourism revenue in Croatia – more than for other destinations – is driven by the increasing number of tourist arrivals and overnights, while average spending per tourist is stagnating.

These findings suggest that tourism is set to remain a key sector of the Croatian economy. However they also highlight that an excessive reliance on the current model may not be sustainable in the long term. The supply of new and well differentiated tourism services could mitigate the risks of stagnation, maximise the impact on other sectors of the economy and reduce congestion and environmental costs. Croatian authorities are aware of challenges and opportunities, but differentiating away from the traditional offer has proven difficult so far. This calls for renewed and coordinated efforts by policymakers at all government levels to address the existing shortcomings and support the development of the tourism sector in terms of scope and quality of the offer.

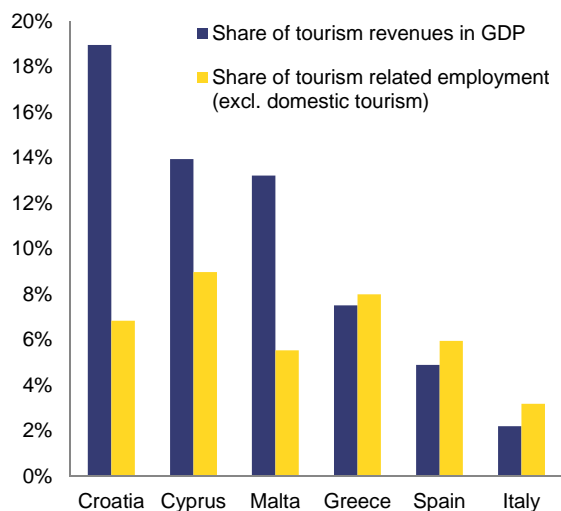
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Introduction

Inbound tourism is an important economic activity and a key source of export revenues for Croatia. With its advantageous location and natural attractions, Croatia has always been an important tourist destination. Mass tourism, however, expanded in the 1960s and in the 1970s in accordance with the economic policy of former Yugoslavia (Kapust and Wiluś, 2017). The volume of arrivals dropped sharply during the wars of the early 90s,¹ but the tourism industry has since recovered and – following a temporary slump in the wake of the global financial crisis – is now booming. Spending by international tourists contributes significantly to domestic output and – similarly to exports of goods and other services – represents a major source of external earnings. According to BOP statistics, expenditure by international tourists amounted to 45.5 billion EUR in 2016, roughly 19% of Croatia's GDP and over 35% of its export revenues,² confirming the economy's high reliance on the tourism sector. Moreover, international tourism accounted for roughly 7% of the employed population.³

Figure 1: Tourism revenues and employment, 2016



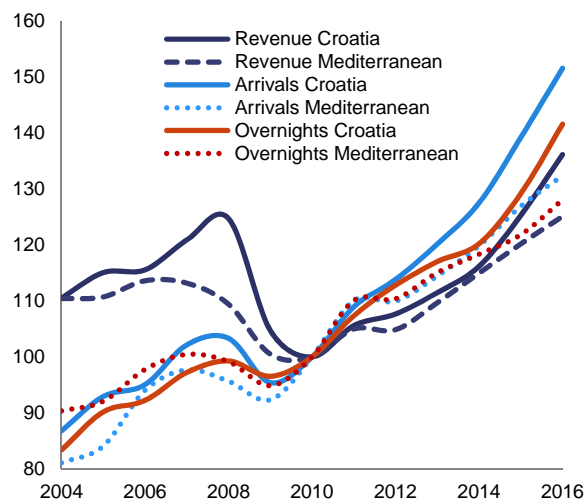
Note: See endnotes 2 and 3.

Source: Eurostat

In recent years, Croatia has outperformed its competitors in attracting foreign tourists. Tourist destinations compete among themselves in attracting international tourism. Over the past decade, Croatia outperformed the average of the other EU countries in the Northern Mediterranean region (Cyprus, Greece, Italy, Malta and Spain) in increasing its international tourism revenues, non-resident tourists' overnight stays and arrivals from abroad (see Figure

2). The picture is partly biased by the weaker growth recorded by Italy – the second largest destination for international tourism after Spain. However, even when excluding Italy from the aggregate, Croatia still outperformed all of its regional competitors.

Figure 2: International arrivals, non-residents' overnight stays and tourism revenues in Croatia and in the Northern Mediterranean (2010=100)



Note: The Northern Mediterranean region includes Greece, Spain, Italy Malta and Cyprus

Source: Eurostat

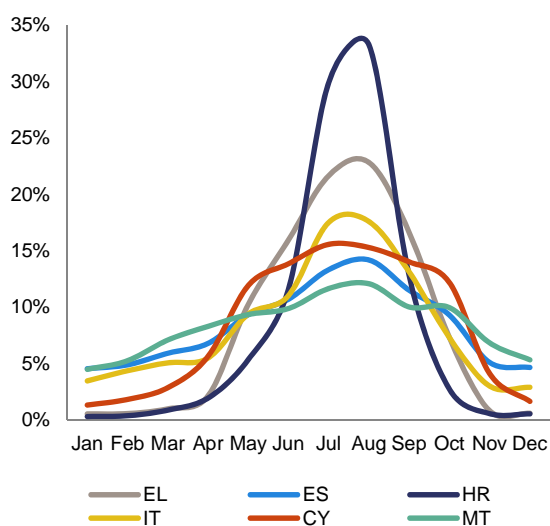
Some structural weaknesses prevent the sector from achieving its full potential. International tourism is on the rise, worldwide and in Europe. Its expected continued expansion is an opportunity for Croatia, but the sector is still far from achieving its full potential. High seasonality, limited range of services, and low average spending are frequently mentioned weaknesses of the Croatian tourist model (Ministry of Tourism, 2013). This note tries to shed light on the opportunities and challenges of the Croatian tourism industry. It first discusses the structural characteristics of the Croatian tourism model by benchmarking key indicators against those of its competitors in the northern Mediterranean region. It then analyses the drivers of demand for tourism services in Croatia and its competitors. Finally, the note draws conclusions on how policy could enhance the positive impact of tourism on the Croatian economy. The analysis focuses solely on international tourism, which represented about 92% of overall tourism in 2016.

The Croatian tourism model in comparative perspective

Croatia's features a typical "sun and sea" tourism model, with relatively long stays,

concentrated in the coastal areas and over the summer months. Even though Mediterranean countries have a lot to offer in terms of historical and cultural heritage, most tourists visit them to enjoy a warm climate and the coastal natural attractions. Like in several other Mediterranean destinations, Croatian tourism is focused on "sun and sea". It is geographically concentrated along the coast, which generates congestion costs and feeds regional imbalances. Moreover, nowhere in the EU does tourism show such a strong seasonal profile as in Croatia. In 2016, more than 75% of tourist nights were spent in July, August and September (Figure 3). This may be related to the colder weather conditions outside the summer months in Croatia compared to other southern Mediterranean destinations. Greece has also a very seasonal tourism, but there the season starts already in April and ends in October. Finally, tourists in Croatia tend to prefer relatively long stays – typically organised around weekly packages. The average length of a stay in Croatia was 5.3 days in 2016, below the average length of stays in the islands of Cyprus (6.3) and Malta (5.9), but above Spain (4.8) or Italy (3.6), which are more important destinations for week-end city trips.⁴

Figure 3: Yearly distribution of overnights by international tourists, 2016

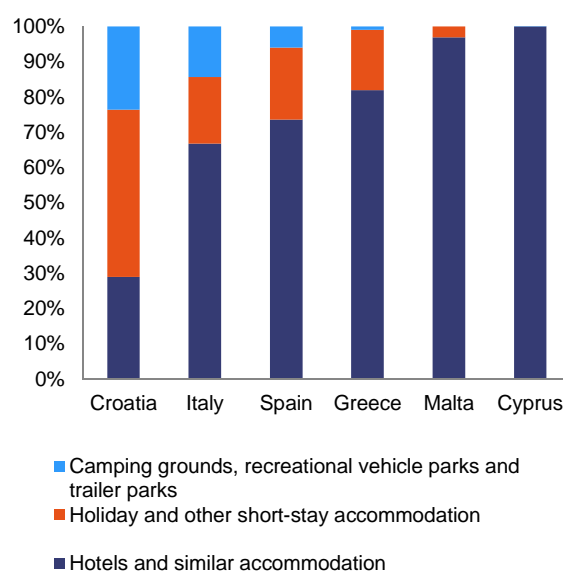


Source: Eurostat

The high seasonality of arrivals is challenging for local businesses operating in the tourism sector and limits its spill-over effect to other sectors. High seasonality is particularly problematic for infrastructures that tend to have high running costs irrespective of the utilisation rate, such as large hotels. In December 2015 and January 2016, hotels'

occupancy rate was below 20%, but in the month of August it exceeded 98% – the highest occupancy rate in the EU. Beyond the food and accommodation industry, retailers also face challenges as well as producers and suppliers of goods and services typically demanded by tourists. Orsini (2017) shows that the elasticity of imports with respect to tourism is in the order of 0.7. The high reliance of Croatia's tourism sector on imports is explained by the difficulty to expand production in order to satisfy demand during the short summer season. This high "leakage rate" ultimately limits the positive impact of tourism on other domestic sectors. Moreover, the structure of the accommodation sector (discussed below) is oriented towards less labour intensive establishments (private houses and camping). This may explain the relatively low share of employment in the tourism sector compared to the overall size of tourists' expenditure in GDP. Moreover, the high seasonality does not favour stable employment relationships throughout the year: roughly 45% of workers employed in the tourism industry are temporary workers – by far the highest share in the EU.

Figure 4: Nights spent in tourist accommodation by non-residents, by type, 2015

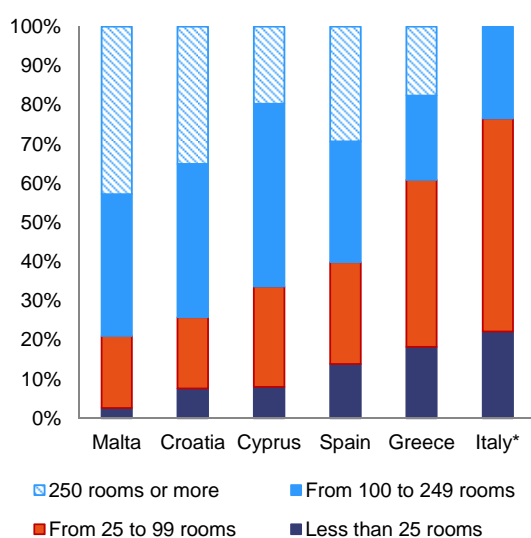


Source: Eurostat

The majority of non-resident tourist overnight stays in Croatia is spent in private houses and camping grounds. Tourist accommodation in Croatia is often provided in vacation homes or rented rooms (figure 3). All in all, the category "holiday and other short-stay accommodation" – which includes this form of privately supplied accommodation – accounted for more than 45% of

total tourist overnight stays in 2015.⁵ Croatia also recorded the highest share of overnights in camping grounds, recreational vehicle parks and trailer parks amongst EU Mediterranean tourist destinations. By contrast, hotel and similar accommodations accounted for only 30% of stays as opposed to more than 65% in all the peer countries. What is more, private accommodation and camping grounds account for the bulk of the growth in the past ten years. Between 2005 and 2015, tourist overnights in these establishments grew by roughly 90% and 30%, respectively, whereas overnights in the hotel sector increased by a mere 17%.

Figure 5: Hotels and similar accommodation by size class, 2015



Notes: for Italy the categories "from 100 to 249" and "250 and above" are merged.

Source: Eurostat

The hotel industry is dominated by large establishments in the low-mid price range. Large hotels – 100 rooms or more – supply more than 70% of total bed places. The category of very large hotels – that is, hotels with more than 250 rooms – also features a large weight in the hotel offer: at well above 30% of total beds, it is one of the highest shares amongst the countries considered. Almost 60% of the hotel accommodation capacity is in the mid-range of two to three stars. According to national statistical sources, the share is around 50% for Italy, whereas in the case of Malta two and three stars hotels account for only 30% of total capacity. This configuration is partly a legacy of the planned economy, and still today the state owns a number of large hotel establishments. The predominance of large hotels is also a reflection of the large presence of travel operators in Croatia, which typically aim at

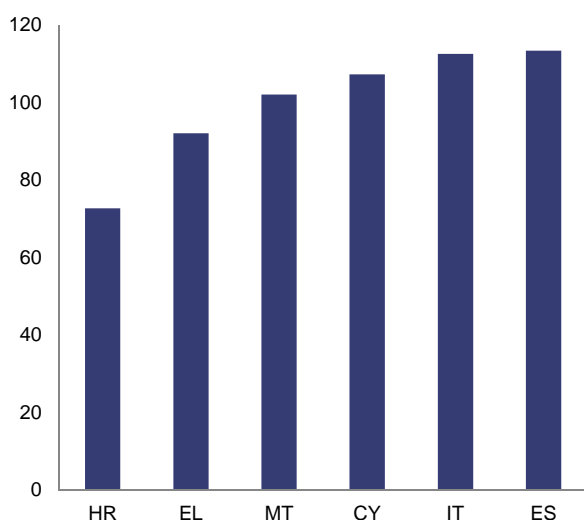
achieving economies of scale. In 2015, some 37% of tourist arrivals were organised by tour operators, below Malta (44%) and Cyprus (62%) – which also feature large hotel establishments – but well above Spain (29%) or Greece (13%).

Foreign tourists tend to arrive in Croatia by car, mainly from nearby EU Member States. Croatia benefits from a favourable geographical position. For many EU countries in Central and Eastern Europe it represents the closest access to the Mediterranean Sea. Indeed, the bulk of international tourists comes from Europe (almost 90% of arrivals and over 95% of nights stay), with a handful of countries in the proximity (Austria, Germany, Italy, Slovenia, the Czech Republic, Slovakia and Hungary) accounting for more than two thirds of arrivals and slightly more in terms of overnights. The international demand for Croatian tourism is however less concentrated than in some other Northern Mediterranean destinations such as Spain, Malta and Cyprus. Ease of access implies that international tourists arrive to Croatia mainly by car (more than 90%). While this contributes to lower travelling costs, it also leads to congestion at the borders, as frequently shown by the long queues at the border with Slovenia, with negative impacts on the environment – particularly air quality. The use of private cars also means that passenger transport services contribute to a very limited degree to the local economy. Over the past few years the opening of low-cost flight routes have provided connections to more distant European countries (including from Western and Northern Europe), and air transportation may expand further. At the same time, arrivals by other means of transport – such as train or bus – have been decreasing. This is certainly related to the fact that Croatia's railway network remains under-developed and largely inefficient.

Average tourist expenditure in Croatia is significantly below that recorded in EU peers partly due to lower prices. The price of tourism services and the characteristics of the tourism model largely determine tourist spending. The "sun and sea" model is typically associated with lower levels of consumption and a tourist infrastructure skewed towards the mid-low range. In Croatia the average tourist spending per person and night (computed as the ratio of foreign tourism revenue to the number of non-domestic overnights) is around 70% of the average for the Mediterranean region.⁶ Part of the gap can be attributed to the lower level of prices compared to the Mediterranean region. The dynamics of the price index of hotel and restaurant

services can be taken as a good proxy for the evolution of prices of tourist services. Over the past 15 years, the sub-index for Croatia evolved broadly in line with developments in other Mediterranean destinations, bar Italy, which experienced somewhat slower growth. In terms of levels, however, prices for comparable bundles of goods and services (in 2016) were on average 30% lower in Croatia than in its peers.⁷ Furthermore, the average tourist spending has been decreasing in recent years, since the number of tourist arrivals and non-residents' overnights have been growing faster than tourism revenues. This trend is also observed in other countries, like Spain and Cyprus, but seems particularly pronounced in the case of Croatia.

Figure 6: Average expenditure per night per person (Mediterranean region=100)



Source: Eurostat and www.budgetyourtrip.com

Income and price elasticity of tourism demand

The bulk of econometric research on the drivers of tourism is based on the consumer behaviour theory. The demand for tourism (defined in terms of arrivals, overnights or real expenditure) is often modelled as a function of the purchasing power in the place of origin and tourism prices in the destination relative to prices in the place of origin. Some studies also include prices of tourism services in competing destinations (i.e. the prices of potentially alternative locations) and transportation costs (Song and Li, 2008). Income is proxied by GDP, industrial production or, in some cases, wages, while relative prices are proxied by the general price level or some sub-index. The place of origin refers

either to a specific country or a group of countries, while the tourist destination is either one single country or alternative destinations. In the latter case, some studies model how a representative agent allocates the total budget for tourism across the different destinations (Gatt and Falzon, 2014). All these approaches ultimately estimate income and own-price elasticity, while some also estimate cross price elasticities. These models tend to be econometrically more demanding as they rely on the specification of a full demand system where a representative consumer allocates expenditure across a multiplicity of tourist destinations. Income elasticity measures the responsiveness of the quantity of certain products or services demanded by consumers to a change in their income, while the price elasticity of demand measures the responsiveness to a change in the prices of the demanded goods or services.

Cross country differences in tourism models are likely to be reflected in different sensitivity of demand to income and prices. Empirical studies have confirmed that tourism is a "luxury good", i.e. its demand increases more than proportionally with respect to income. Price elasticities are mostly negative and the range of variation across available studies is often large (Song *et al.*, 2010). In principle, differences in elasticities should reflect structural differences across destinations. Namely, it is to be expected that tourist destinations offering easily substitutable services and amenities will in general feature a higher own- and cross-price elasticity than more unique destinations. Similarly, expenditure on more exclusive destinations should increase faster with disposable income than expenditure on less luxurious destinations.

Aggregate income elasticities are also affected by non-linearities. Households with limited financial resources often do not travel abroad for vacation, yet as their income rises above a minimum threshold, they may start spending on international tourism services (most likely on lower-end destinations). In technical terms, expenditure on tourism therefore features "non-linearities" with respect to income. At aggregate level, the change in spending resulting from such threshold effects could yield high income elasticities even for lower-end touristic destinations.⁸

Available studies on the demand for Croatian tourism services have typically found high income, but weak price elasticity. Despite the importance of the tourism industry in Croatia, there is relatively little quantitative analysis of its

determinants. Most available studies, e.g. Mervar and Payne (2007) and Škuflić and Štoković (2011), find that Croatian tourism demand is more responsive to changes in the income of origin countries than to changes in prices, exchange rates and transportation costs. Bellulo and Krizman (2000) find that tourism demand is determined by permanent changes in the income of tourists, rather than one-off or short-term shocks to their income. According to Stucka (2000 and 2002), the income elasticity of tourists from Germany, Italy, Slovenia and Austria ranges from 0.9 to 6.7, while – somewhat surprisingly – it is negative for Czech tourists. Culiuc (2014) explores how tourists adjust their vacation choices through changes along the extensive margin – by traveling to a particular destination or not, as reflected in data on arrivals – and the intensive margin – by adjusting the duration of their stay in one particular destination, as reflected in the average length of stay. Concretely, the study estimates two separate gravitational equations with respect to arrivals and overnights. The extent to which tourists adjust the length of their stay (demand changes along the intensive margin) is subsequently computed as the difference between the income elasticity of overnights and the income elasticity of arrivals. The absence of a significant difference between these two indicators suggests that changes in income significantly affect the decision to travel abroad and/or to new destinations, while they do not impact the decision on the length of stay in the same destination. To avoid problems in comparing estimates across countries drawn from different studies, we develop a fully consistent econometric framework for estimating and comparing the elasticity of demand for tourism to Croatia and other Mediterranean destinations in the following section.

International demand for tourism in Croatia and the Mediterranean

Tourism demand is modelled as a function of purchasing power in the EU, the relative price of tourist services and travel costs for each destination country. Based on a standard demand function model, we estimate tourism demand by using three alternative dependant variables: the number of outbound tourist *arrivals* (T^a), the number of outbound *overnights* (T^o) and *revenue* from tourism (T^r).⁹ The independent variables, i.e. the purchasing power in the origin countries and relative prices of tourism services, are proxied by, respectively, real GDP (Y^{EU}) and the price of

Croatian restaurant and accommodation services ($p^{HR,ra}$) relative to the overall level of prices in the countries of origin, i.e. the HICP index (p^{EU}). We also include a proxy for transport costs, which in line with the bulk of the literature, is defined as the ratio of the price of liquid fuels ($p^{EU,fuel}$) to the overall price level in the country of origin. We do not model demand from specific origin countries, but rely on GDP and the price level in the EU as a whole, since the bulk of tourism to Mediterranean destinations comes either from the EU or from other non-EU European countries whose price and income dynamics tend to be highly correlated with those prevailing in the EU. Moreover, we relied on a standard modelling framework based on partial equilibrium, instead of the computationally more demanding (but also more restrictive) fully-fledged demand system. For Croatia only we also estimate separately demand from the EU15 and the CEE10. All variables, including price ratios, are expressed in natural logarithms, so that the estimated coefficients in the following equation can be directly interpreted as elasticities:

$$T_t^j = \alpha_j Y_t^{EU} + \beta_j \left(\frac{p_t^{HR,ra}}{p_t^{EU}} \right) + \gamma_j \left(\frac{p_t^{EU,fuel}}{p_t^{EU}} \right) + \epsilon_t^j,$$

Each of the three equations (i.e. with $j=arrivals, overnights, real\ expenditure$) is estimated separately for Croatia, Greece, Italy and Spain.¹⁰ The equations are estimated via Fully Modified Least Square, an approach frequently adopted with series displaying a trend – as indeed in this case.

The international demand for Croatian tourism is more income elastic than for other destinations in the Mediterranean region. The econometric analysis shows that each percentage point increase in GDP in the EU drives the number of arrivals up by 4.3% in Croatia, 4.0% in Greece, 3.8% in Spain and only 2.8% in Italy. This makes Croatia the most income-elastic destination in the Northern Mediterranean. It also explains the strong performance of Croatian tourism over the last years, and the particularly sharp contraction in the years of the crisis. With respect to overnight stays, income elasticity is somewhat lower across all countries: 3.7 for Croatia as opposed to 3.1, 3.0 and 2.1 for Greece, Spain and Italy, respectively. For Croatia the results are very similar to the findings in Škuflić and Štoković (2011).

The difference between income elasticities for arrivals and overnights can be attributed to the different consumption patterns across tourists originating from different countries. Our estimates appear in contrast with the findings of

Culiuc (2014), since the income elasticity for arrivals is systematically (and mostly statistically significantly) higher than the income elasticity for overnights. The analysis in Culiuc (2014), however, is based on bilateral tourism flows and not on aggregate inflows, as in our case. When estimating separately the equations for the EU15 and CEE10, income elasticities differ depending on the origin of tourists. However, for the same origin aggregate,

arrivals and overnights elasticities tend to converge. The average length of stay, moreover, is slightly higher on average for EU15 than for the CEE10. The combination of different elasticities and different average duration across place of origin suggests that composition effects largely explain the gap between arrival and overnights elasticity and the "apparent" negative contribution of changes in demand along the intensive margin.

Table 1: Income and price elasticity of international demand for tourism in Croatia and other Mediterranean destinations

	Croatia			Greece			Spain			Italy			Croatia (from EU15)		Croatia (from CEE10)	
	Arrivals	Nights	Revenue	Arrivals	Nights	Revenue	Arrivals	Nights	Revenue	Arrivals	Nights	Revenue	Arrivals	Nights	Arrivals	Nights
Income elasticity	4.33	3.69	2.05	4.01	3.14	1.60	3.81	2.95	1.88	2.80	2.10	1.16	3.30	3.14	1.19	1.07
Price elasticity	-1.85	-1.66	-0.78	-2.17	-2.36	-2.64	-2.03	-2.70	-1.84	-4.90	-3.53	-3.27	-1.94	-2.17	-1.52	-1.41
Cost of travel elasticity	-0.33	-0.27	-0.28	<u>-0.16</u>	<i>-0.18</i>	-0.28	-0.08	-0.11	-0.14	-0.20	-0.10	-0.31	<i>-0.16</i>	<i>-0.24</i>	-0.41	-0.34
Adjusted R2	0.90	0.83	0.52	0.93	0.91	0.79	0.97	0.96	0.79	0.93	0.92	0.65	0.68	0.60	0.79	0.80
Phillips-Ouliaris tau-statistic	-7.93	-8.24	0.00	<i>-4.76</i>	<i>-4.95</i>	<i>-5.23</i>	<i>-3.93</i>	<u>-4.81</u>	-5.80	-4.77	-7.55	-6.79	-7.05	-7.32	-7.18	-8.18
Phillips-Ouliaris z-statistic	-59.35	-60.12	-7.64	<u>-30.47</u>	<i>-32.87</i>	<i>-34.21</i>	<i>-24.11</i>	<u>-32.51</u>	-47.08	-31.32	-58.92	-41.72	-55.79	-57.08	-58.61	-69.79

Notes: Fully Modified Least Squares, coefficients in **bold**, italic and underlined are significant at the 1, 5 and 10% level respectively. The sample includes 52 quarterly observations spanning from 2003 to 2016.¹¹ The model also includes a constant and a dummy for the post-crisis period from 2008Q3 onwards.

Source: Eurostat and Croatian Bureau of Statistics, own calculations

The overall high income elasticity of demand for Croatian tourism may be explained by the prevailing socio-economic characteristics of its core tourists. The higher income elasticity of international demand for Croatian and Greek tourism is somewhat puzzling at first sight. Higher income elasticity is typically associated with higher-end destinations and more sophisticated tourism services, whereas the evidence provided in this study suggests this is not the case for Croatia (and to a lesser extent Greece). As mentioned above, however, it is possible, that when household income reaches a certain threshold a substantial number of households start traveling abroad for vacation and a relatively high share of these "new international tourists" travel towards lower-end destinations. We should therefore apply some caution in defining expectations on aggregate elasticities solely on the basis of the characteristics of specific tourism services. Incidentally, such non-linear effects may also explain the lower income elasticities for tourism from CEE10 countries. Available statistics suggest that the share of households travelling abroad for vacation in CEE10 catching-up economies is still

well below the share for ex-EU15 countries. It is likely that the income threshold where international tourism becomes affordable has not yet been reached by a sufficiently large number of households. Rapid income convergence in CEE10 is likely to bring about higher income elasticity for this segment of tourists in the future.

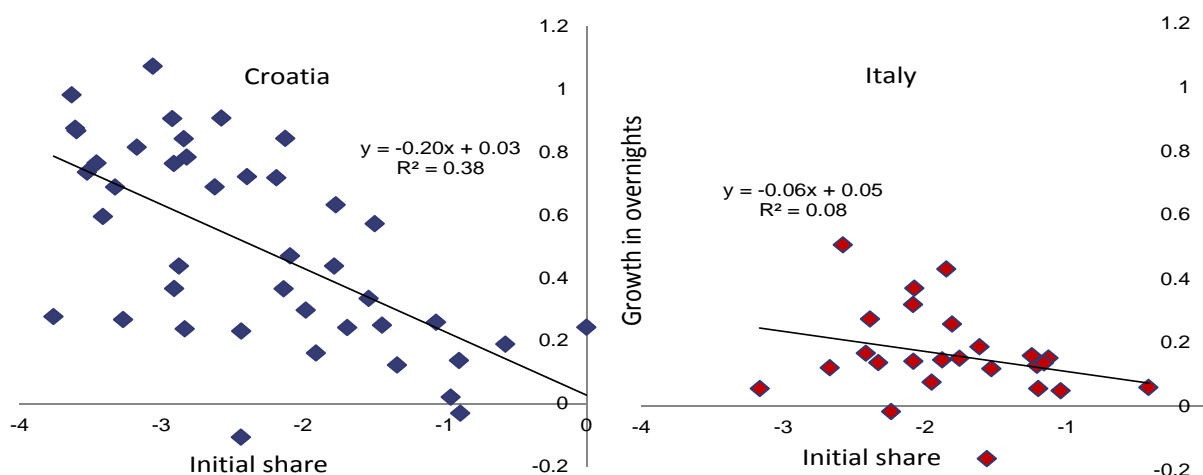
The fast growth in previously untapped markets also explains high income elasticity. The growing penetration of Croatian tourism services in new markets is well illustrated in Figure 7. The relationship between the growth in overnight stays between 2003 and 2016 and the initial position by origin country (measured as the logarithm of the share of total overnight stays by origin country in 2003) is strongly negative in the case of Croatia. This means that growth of Croatian tourism is to a large extent driven by expansion into (previously) marginal markets, rather than an increased weight in well established markets. The opening of low-cost flight connections between Croatia and more remote Member States has presumably supported this development, as it has contributed to lowering the

income threshold beyond which households engage in international travel. This effect is likely to have been stronger for destinations where travel expenditure makes up for a large share of the total expenditure on tourism services. The contrast with a well-established tourist destination like Italy, which features the lowest income elasticity, is striking. In Italy, the growth in the number of overnights is weakly correlated with the initial share of tourists from different origin countries, and growth in flows is driven by proportional increases across countries of origin.

Whereas diversification of origin countries is welcome, product diversification still lags behind. Diversifying demand away from the neighbouring countries is a welcome development for Croatia. The

relatively large exposure to tourists from Slovenia and Italy, for example, has had a negative impact during the economic crisis, since both countries were heavily affected. Equally important, however, is the diversification in terms of supplied services, since eventually the demand for existing Croatian "sea and sun" tourism services is likely to hit a saturation point (Butler, 1980). Currently there is only weak evidence of a greater diversification in terms of tourism services' supply. Indeed, in Croatia the bulk of the growth of tourism activity remains concentrated in the low-medium cost private accommodation along the coast, and the share of tourists arriving in July and August has further increased in the last two years.

Figure 7: Correlation between initial market share and growth in overnight stays in Croatia and Italy (2003-2016)



Notes: The dots correspond to the countries of origin to each of the two destination countries. The initial share is expressed in natural logarithms to address excessive dispersion.

Source: Eurostat and Croatian Bureau of Statistics, own calculations

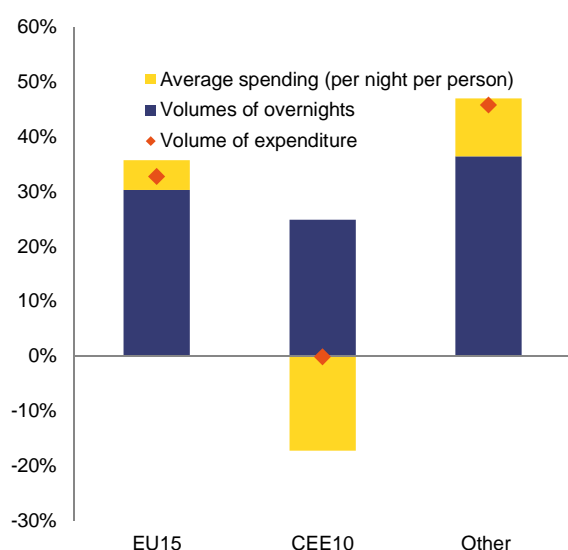
More than in other countries, tourism revenue is driven by the soaring volumes of overnights, while average spending is stagnating or even decreasing. Our results show that for all four tourist destinations, an increase of income in the origin country generates a stronger increase in the number of overnights than in the volume of spending, meaning that average spending per night per tourist tends to decrease as the volume of tourism increases. This decrease, however, is stronger in the case of Croatia and Greece (1.6 and 1.5 respectively), than in Spain and Italy (1.1 and 0.9 respectively). This may be linked to aforementioned progressive lowering of air fares, which opens up international travel opportunities to less well-off tourists. Technically speaking, this implies that the contribution at the intensive margin (how much to

spend on vacation per person) tends to be negative over the considered period of time and countries, but the reduction in spending per person was highest in Croatia.

In the case of Croatia, decreasing per-capita spending appears also related to the increasing share of tourists with lower purchasing power from Central and Eastern Europe. Composition effects clearly play a role. On average, tourists from Central and Eastern Europe spend roughly 55% less per night per person than tourists from the EU15 – i.e. roughly 62 EUR and 140 EUR per night per person respectively. Moreover, in real terms, the average spending per night per person of EU15 tourists has slightly increased between 2010 and 2015, whereas it decreased by more than 15% for

tourists from CEE10 (see Figure 8). The reasons behind this structural shift are difficult to identify. Differently from the data on arrivals and overnights, available data on revenues do not allow estimating separate equations by country of origin due to the lack of disaggregated Balance of Payments statistics on a quarterly basis.

Figure 8: Contribution to growth in volume of tourism revenue in Croatia by volume of arrivals and increase in average spending (per night per person), 2010-2015



Source: Eurostat, own calculations

A model of tourism which relies on increasing the number of tourists can have negative spill-overs to the environment. The European Environment Agency (EEA) warns that tourism density, infrastructure and activities – especially in the Mediterranean – can have irreversible effects on biodiversity and can result in habitat deterioration. Surges in the number of tourists impact waste generation and energy consumption (for example, a tourist consumes 3 or 4 times more water per day than a permanent resident). In this respect, according to the EEA (2015), the most critical sector that needs urgent action is waste management.

On the positive side, tourism in Croatia tends to be less sensitive to changes in relative prices, probably owing to limited substitution effects with more pricey destinations. Our findings confirm that tourism demand in Northern Mediterranean countries can be extremely sensitive to prices. However, Croatia features the lowest price elasticity among the countries considered – irrespective of the dependent variable used (i.e. arrivals, overnights or expenditure). This is

consistent with previous studies on Croatia which in general find small or non-significant price elasticity. The price elasticity for tourism revenue in particular is almost identical to the one found in Mervar and Payne (2002) – despite the very different time period and methodology. This specificity of Croatian tourism vis-à-vis other destinations is probably due to the persistently lower price level compared to other Mediterranean destinations. Whereas the dominant "sea and sun" model remains *per se* highly substitutable, the substantial price gap with other destinations in the neighbourhood is clearly a pull factor – particularly for tourists from Central and Eastern Europe with lower purchasing power. It is also worth noting that the price elasticity is actually higher for EU15 tourists, possibly due to the fact that for some of them vacations in Croatia are part of a broader allocation of travel expenditure across different destinations. In general, the low price elasticity is favourable for Croatia, as it suggests limited losses from higher inflation and/or an appreciation of the kuna. However, it may also indicate challenges for the further development of the sector: if Croatia were to climb up the value-ladder, prices would inevitably converge to the levels of other Mediterranean destinations – turning tourist demand more price elastic than it currently is. This highlights the need to develop a broad product differentiation, capable of attracting a more heterogeneous tourism demand.

At the same time, Croatia is more affected than other countries by fluctuations in fuel prices. Fuel prices have been subject to extreme fluctuations over recent years. The impact of fuel prices on overnights and tourist spending appears to be much stronger in Croatia than in alternative destinations. A 10 pps increase in the relative price of fuel decreases arrivals, overnight stays and spending by roughly 3%. Elasticities in other countries tend to be much lower for arrivals and overnights, whereas oil prices appear to have a broadly comparable impact on overall spending. The higher elasticity to oil prices in Croatia is partly explained by the high share of arrivals by cars, but probably also by the higher share of spending on fuels in less affluent households. An increase in oil prices therefore not only increases the cost of travel, but also reduces the purchasing power. For tourists visiting other Northern Mediterranean destinations this may not impact significantly the decision to travel or the amount of days spent, but rather average amounts spent. Tourists to Croatia, however, react by reducing the arrivals and overnights. Here too, composition effects are relevant: the impact of fuel

prices is particularly significant for CEE10 tourists, but it is not statistically significant for tourists from the EU15. This somehow reinforces the hypothesis made above: tourists to Croatia, and especially those from the CEE10 are not, in general, extremely sensitive to the prices of services in Croatia due to limited affordable alternatives, but they are likely to face more stringent budget constraints.

Concluding remarks

Tourism is a key sector of the Croatian economy.

The sector benefits from the gradual income recovery in the EU and its relatively low price level, but more recently also from the low energy prices and the instability in competing destinations on the southern and eastern shores of the Mediterranean Sea. The latter effect is not explicitly modelled in this study. In the short to medium run, both arrivals and overnights are set to keep growing strongly – underpinned by further penetration into non-neighbouring countries and rapidly increasing living standards in Central and Eastern Europe.

Capacity constraints are likely to be lifted by new investment, but concerns about over-exploitation of natural resources and social impacts remain.

While a significant share of the recent surge in investment has been directed to the food and accommodation sector, high occupancy rates in summer months suggest that Croatia is approaching full capacity, at least in the hotel segment. Developers need to avoid excessive exploitation of the coastline, which can be observed in other tourist destinations. Beyond environmental concerns, social considerations have also recently been brought to the fore, as excessive congestions in some destinations provoke backlashes from local residents who may suffer from reduced access or higher prices of services.

Excessive reliance on the current tourism model may be unsustainable.

Tourism flows are potentially volatile and, as other products and services, tourism has its own life cycle, and is subject to changes in preferences and demand saturation. The attractiveness of Croatia is partly due to the fact that the country is being re-discovered as a tourist destination. Yet, in the long run all tourism destinations are exposed to risks of stagnation and even decline¹². Currently Croatia appears far from saturation point, but risks should not be underestimated. Policymakers should avoid excessive reliance on the tourism sector in general,

while promoting its diversification. This could also result in a stronger impact of the tourism sector on the overall economy, as the currently low level of average spending and high seasonality are likely to dampen the multiplier effect on other domestic sectors.

The Croatian authorities are aware of challenges and opportunities, but differentiating away from the dominant sun and sea model is proving difficult.

A SWOT (Strengths, Weaknesses, Opportunities and Threats) analysis is part of government's 2013 tourism development strategy, which is meant to frame government tourist policy up to 2020. The authorities have identified vertical (i.e. quality) and horizontal (i.e. type of tourism) dimensions in diversifying Croatia's tourism model. While the quantitative targets of the strategy (revenue generation and employment) appear within reach, the differentiation is lagging behind. According to a longitudinal survey of tourists' attitudes, the primary motive for coming to Croatia during the summer remains rest and relaxation at the seaside (75%), broadly unchanged since 2010, which highlights the difficulties in establishing a stronger brand for a different typology of tourism (Institute for Tourism, 2015). This calls for a reinforced implementation of supporting measures: leveraging Croatia's historical heritage, the touristic development of inland cities and natural beauties, the development of gastronomic tourism, wellness and health tourism. The supply of new and differentiated tourism services could reduce the risk of stagnation and maximise the impact on the overall economy.

Public institutions can play an important role in fostering the competitiveness of the Croatian tourism industry.

Tourism demand is becoming increasingly sophisticated and managing tourism on all levels of decision making is therefore ever more complex. Public institutions at the central and local level play a key role in enhancing the cooperation between the public sector, private sector and the local population in the offer of tourism services, thus guiding tourism development. Besides the efforts to differentiate the offer, other challenges of Croatia's tourism – which have not been analysed in this study – relate to an inadequate stakeholder involvement and coordination, the fragmentation of local government levels, insufficient funding and unskilled human resources¹³. In order to support the further development of the Croatian tourism sector, addressing existing challenges in terms of human and financial resources, governance and coordination appears warranted.

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¹ During Croatia's independence war, tourism collapsed. In 1990, Croatia recorded over 50 million overnights by foreign tourists, but by 1991 the figure had dropped to just above 10 million.

² In accounting terms, tourism is not a sector *per se*, but rather a set of activities across different industries ranging from travel, retail, food and accommodation services and public services. As such its size is best measured by the expenditure by non-residents when travelling to the country, which is typically registered as the "travel sub-balance" in the export of services in BOP statistics. This figure possibly underestimates the total expenditure of non-resident tourists in the country, since it does not include transport services. As all exports, expenditure by tourists does not *contribute* to GDP by its equivalent amount – since a large share of tourist demand is also met by imports. Orsini (2017) for example estimates the import elasticity of tourism at roughly 0.65, meaning that for every EUR flowing into the country from tourism, 65 cents flow out again in the form of higher imports.

³ Employment in the tourism industry is derived from the Eurostat database on tourism (*tour_ifsa*) and is measured as employment in the following industries: (i) food and accommodation, (ii) air transport and (iii) travel agencies, tour operators, reservation services and related activities. For the purposes of our analysis, we adjust this figure for the share of international overnights in the total number of overnights (i.e. domestic and international). The correction is important for Italy and Spain, which feature significant flows of domestic tourism. By contrast, the correction factor is very small for the other economies, given the almost negligible size of domestic tourism in overall tourism. In particular, in Croatia, the share of domestic tourism was less than 8% in 2016.

⁴ The available data on arrivals and overnights however do not distinguish between tourism proper and business travel.

⁵ This accommodation typology (NACE Class 55.2) includes the provision of accommodation, typically on a daily or weekly basis, principally for short stays by visitors, in self-contained space consisting of complete furnished rooms or areas for living/dining and sleeping, with cooking facilities or fully equipped kitchens. This may take the form of apartments or flats in small free-standing multi-storey buildings or clusters of buildings, or single storey bungalows, chalets, cottages and cabins. Very minimal complementary services, if any, are provided (Eurostat). According to the Croatian Ministry of Tourism, which provides further disaggregated figures, in 2015 international tourists spent 38% of overnights in private rooms and around 2% in tourist apartments (MOT, 2015).

⁶ The figure is not adjusted for Purchasing Power Parity, since it is assumed that tourists are mainly concerned about their aggregate level of spending on tourist services rather than the prices of other local goods/services.

⁷ The figure is derived from the website www.budgetmytrip.com, which publishes survey based average prices for a comparable bundle of goods in a number of touristic destinations.

⁸ Eugenio-Martin and Campos-Soria (2011) model the role of income in the decision of travelling abroad or spending the vacation in the home country. They find the existence of income thresholds above which individuals start substituting domestic with international travel. It is also possible that similar thresholds exist between different classes of destinations.

⁹ Revenues from tourism come from Balance of Payment statistics. Nominal values are deflated using the price index of restaurant and accommodation services.

¹⁰ Unfortunately, estimates for Malta and Cyprus failed to deliver consistent results – possibly due to the importance of other variables, such as air transportation costs.

¹¹ Quarterly figures for arrivals and overnights by outbound tourists have been aggregated from monthly data and seasonally adjusted using the X12 routine. All data, including GDP, prices and tourism expenditure from BOP statistics come from EUROSTAT. The only exception is data on arrivals and overnights for Croatia which come directly from the national

source. The reason for this is that EUROSTAT definition for arrivals and overnights initially excluded arrivals and overnights in privately supplied accommodation. This resulted in a negligible break in the series for the other countries, but in a significant shift in the number of arrivals and overnights in Croatia.

¹² Butler (1980) has identified different development stages in the life cycle of a tourist destination: exploration, involvement, development, consolidation and stagnation – eventually followed by either rejuvenation or decline.

¹³ For more details, please refer to the following studies: Bosnić, Tubić and Stanišić (2014); World Economic Forum (2015); Corak and Boranić-Živoder (2017); and Kranjčević (2017).

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