

**Tourist Arrivals and Overnight Stays along the Croatian Adriatic Coast:  
Changes in Persistence and Seasonality from the COVID-19 Disruption**

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### **ABSTRACT:**

This study extends the recent work of Payne et al. (2021) with respect to the changes in the persistence and seasonality inherent in the Croatian tourism sector in light of the onset of the COVID-19 pandemic. First, we differentiate between the changes in persistence and seasonal behavior with respect to domestic and foreign tourist arrivals and overnight stays. Second, with nearly 90 percent of the Croatian tourism sector tied to the seven counties along the Adriatic coast, we investigate the differential regional impact on persistence and seasonal behavior. Our results indicate the disruption was much more prominent for foreign tourist arrivals and overnight stays relative to domestic tourist arrivals and overnight stays with respect to the increased persistence associated with the onset of the pandemic, while the seasonal autoregressive component was reduced.

**Keywords:** COVID-19 pandemic; tourist arrivals; tourist overnight stays; persistence; fractional integration; seasonality; Croatia

**JEL Codes:** C22; L83; O41

## Tourist Arrivals and Overnight Stays along the Croatian Adriatic Coast: Changes in Persistence and Seasonality from the COVID-19 Disruption

### 1. Introduction

Croatia's tourism sector serves a prominent role in the country's overall economy contributing nearly 40% to export revenues and 12.4% of overall GDP. More specifically, the Adriatic coast attracts 90% of tourist arrivals and overnight stays in Croatia. In light of the importance of the tourism sector to the Croatian economy, it is not surprising to find that the global COVID-19 pandemic adversely impacted both the tourism sector and the overall economy, as GDP fell 8.1% in 2020 (Payne et al., 2021; Payne et al. 2022). As noted by Payne et al. (2021), the question is whether the shock from the COVID-19 pandemic altered the persistence behavior inherent in key tourism indicators used by both policymakers and those in the tourism and hospitality industry to facilitate the modeling and forecasting necessary to inform tourism planning efforts.

Investigating the degree of persistence in relation to the transitory or permanent nature of shocks associated with tourism indicators is particularly relevant to understanding the appropriate policy response to restore tourism indicators to their original trend path. If a shock is considered transitory in nature then the shock will dissipate rather quickly with the need for policy intervention less likely, whereas if a shock is deemed permanent then policy intervention may be required for restoration of the tourism indicator to its original trend path. Within this stream of the tourism literature, researchers have either used unit root/stationarity tests or fractional integration tests to infer the degree of persistence (i.e. integration) in tourism indicators.

**Comentado [MA1]:** CBS recently published satellite tourism accounts for 2019 and the share has increased from 11.3 in 2016 to 11.8% in 2019.

Unit root/stationarity tests examine whether the differencing parameter,  $d$ , is either 0 (i.e. stationary) or 1 (i.e. first-difference stationary).<sup>1</sup> On the other hand, fractional integration models provide greater flexibility than standard unit root/stationarity tests by allowing the differencing parameter,  $d$ , to vary along a continuous range between 0 and 1, or even greater than 1 in magnitude.<sup>2</sup> There are several ranges of  $d$  (i.e. degrees of persistence) for a time series within a fractional integration framework: (1) stationary and mean-reverting ( $0 \leq d < 0.5$ ), whereby shocks will dissipate quickly as the time series return to its original trend; (2) nonstationary, but mean-reverting ( $0.5 \leq d < 1$ ), shocks will be transitory with the time series taking longer to return to its original trend; and (3) nonstationary and non-mean reverting ( $d \geq 1$ ), shocks will yield a permanent effect in establishing a new trend for the time series. The larger the differencing parameter, the greater the degree of persistence inherent in a time series, which measures the extent to which changes in current market conditions lead to permanent future changes.

Previous studies on the degree of persistence for Croatian tourism indicators in the pre-COVID-19 period include Gil-Alana et al. (2015; 2016) and Apergis et al. (2017). Using fractional integration techniques, Gil-Alana et al. (2015) examine foreign tourist arrivals and overnight stays

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<sup>1</sup> Au et al. (2005), Bhattacharya and Narayan (2005), Narayan (2005a; 2005b; 2005c; 2008), Chu et al. (2008), Narayan and Prasad (2008), Lean and Smyth (2009), Lee (2009; 2010), Smyth et al. (2009), Tang and Wong (2009), Saleh et al. (2011), Chu et al. (2014), Lee et al. (2014), Tan and Tan (2014), Yang et al. (2014), Solarin (2015), Tiwari et al. (2018), Xie et al. (2018), Valadkhani and O'Mahony (2018), Kyophilavong et al. (2019), and Baig and Hussain (2020) have utilized unit root/stationarity tests to primarily examine tourist arrivals for a number of countries within the Asia-Pacific Rim region. In addition, a number of other country studies outside the Asia-Pacific region include Lorde et al. (2009), Bassil et al. (2014), Dedeoglu (2016), Solarin (2016), Charles et al. (2019), Dash (2019), and Yucel (2021).

<sup>2</sup> Studies by Chu (2008; 2009), Assaf et al. (2011; 2012), and Al-Shboul and Anward (2017) examine a number of countries constituting the Asia-Pacific Rim region while Cunado et al. (2004; 2005; 2008), Gil-Alana et al. (2004; 2008; 2010; 2019; 2020), Gil-Alana and Fischer (2010), Nowman and van Dellen (2012), Gil-Alana and Huijbens (2018), Caporale and Gil-Alana (2019), Perez-Rodriguez and Santana-Gallego (2020), and Payne et al. (2021) investigate the degree of persistence in several tourism indicators in the case of European countries. Moreover, Gil-Alana (2011) and Gil-Alana et al. (2014) deploy fractional integration models to study the persistence behavior of several tourism indicators for South Africa and Kenya, respectively. In addition, studies by Gil-Alana (2005; 2009), Cunado et al. (2008b), Payne and Gil-Alana (2018), and Gil-Alana and Payne (2020) explore the persistence in U.S. tourism indicators. Studies by Chen and Malinda (2014) and Andraz et al. (2018) explore the degree of persistence inherent in travel and tourism equity indices.

for the coastal counties to show the degree of persistence is greater than zero but less than one. This suggests that shocks are largely transitory. Gil-Alana et al. (2016) investigate aggregate measures of domestic and foreign tourist arrivals and overnight stays to find shocks are transitory with mean reversion. Similar results are also found by Apergis et al. (2017). More recently, Payne et al. (2021) re-examine the degree of persistence for Croatia's aggregate measures of foreign tourist arrivals and overnight stays to reveal that persistence has increased with the onset of the COVID-19 pandemic. This study extends the analysis of Payne et al. (2021) in the case of Croatia to include the seven counties along the Adriatic coast in analyzing both domestic and foreign tourist arrivals and overnight stays to determine the change in the persistence behavior and seasonality of the data. This is important since the aggregated results can differ from those which are disaggregated at the county level, implying that the effect of a given shock may differ from one county to another.

Section 2 discusses the data, methodology, and empirical results. Concluding remarks are given in Section 3.

## **2. Data, Methodology, and Empirical Results**

The monthly data from 1998:1 to 2021:9 for domestic and foreign tourist arrivals and overnight stays, respectively, were obtained from the Croatian Bureau of Statistics. As evident from Figure 1, the onset of the COVID-19 pandemic created some disruption in domestic tourist arrivals, but has weathered the storm to even show an increase. This may be attributed to the prevalence of international travel restrictions whereby Croatian citizens substituted international travel for domestic tourism. On the other hand, Figure 2 illustrates that foreign tourist arrivals

experienced a more prominent shock. A similar scenario emerges when evaluating domestic and foreign overnight stays as shown in Figures 3 and 4, respectively.<sup>3</sup>

**[Insert Figures 1-4 here]**

We utilize the following fractional integration modeling framework to assess the degree of persistence and seasonality in the tourism data as follows:

$$y_t = \alpha + \beta t + x_t; \quad (1-B)^d x_t = u_t, \quad u_t = \rho u_{t-12} + \varepsilon_t, \quad (1)$$

where  $y_t$  refers to the observed data (in logs);  $\alpha$  and  $\beta$  are unknown coefficients referring respectively to a constant and a (linear) time trend;  $B$  is the backshift operator, i.e.,  $B^k x_t = x_{t-k}$ ; and  $d$  indicates the order of integration. Given the monthly nature of the data,  $u_t$  follows a seasonal (monthly) AR(1) process in which  $\varepsilon_t$  is an uncorrelated ~~zero-zero~~-mean process with constant variance. The model is estimated by using the Whittle function in the frequency domain with tests to determine the confidence band of the non-rejection values of the differencing parameter  $d$  based on a simple version of the test by Robinson (1994).

**[Insert Table 1 here]**

The analysis begins with an examination of the domestic and foreign tourist arrivals for the pre-COVID-19 pandemic covering the period 1998:1 to 2020:2.<sup>4</sup> Table 1 displays the estimates of  $d$  for the selected model based on either one of the three classical assumptions: i) no terms, ii) with an intercept, and iii) with an intercept and a linear time trend. The selection of the appropriate specification is based on the significance of the t-statistics at the 5% level for the intercept term and time trend of the respective models. As shown in Table 1, the selected models do not include

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<sup>3</sup> It is interesting to note the Croatian tourism sector was more successful than other competing tourist destinations during the pandemic due in large measure to Croatia's closeness to source markets via ground transportation instead of air transportation.

<sup>4</sup> The first COVID-19 case in Croatia was reported on February 25, 2020.

time trends in the majority of cases, but just an intercept term. In fact, the time trend is only found to be significant alongside the intercept term in the case of Istria and Lika-Senj for the foreign tourist arrivals and Zadar and Sibenik-Knin for domestic tourist arrivals. The difference parameter,  $d$ , measuring the degree of persistence in the case of domestic tourist arrivals ranges from 0.19 in Sibenik-Knin to 0.40 in Istria. The point estimates of the differencing parameter,  $d$ , suggest domestic tourist arrivals are stationary with mean reversion. The seasonal autoregressive coefficient estimates range from 0.898 in Lika-Senj to 0.974 in Zadar, indicative of a strong seasonal component in the data. With respect to foreign tourist arrivals over this same period, the differencing parameter,  $d$ , ranges from 0.17 in Istria to 0.69 in Split-Dalmatia. With the exception of Zadar, Split-Dalmatia, and Dubrovnik-Neretva, the point estimates of the differencing parameter,  $d$ , indicate foreign tourist arrivals are stationary with mean reversion. The seasonal autoregressive coefficient estimates for foreign tourist arrivals are larger than domestic tourist arrivals and range from 0.968 in Sibenik-Knin to 0.988 in Primorje-Gorski kotar.

**[Insert Table 2 here]**

When we extend the estimation period to include the period of the COVID-19 pandemic (1998:1 to 2021:9), we observe in Table 2 the intercept terms are statistically significant with the time trend insignificant, as well as changes in the degree of persistence and seasonal behavior with respect to tourist arrivals.<sup>5</sup> In terms of domestic tourist arrivals, the difference parameter,  $d$ , ranges from 0.41 in Lika-Senj to 0.66 in Istria and Split-Dalmatia, an increase relative to the pre-COVID-19 period. With the exception of Lika-Senj, the point estimates of the differencing parameter,  $d$ , indicate domestic tourist arrivals are non-stationary, but mean-reverting. Hence, shocks will be

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<sup>5</sup> Alternatively, we could have examined the degree of persistence exclusively for the COVID period, but the sample size would then be too small to make reasonable and significant inferences from the results. In this respect, we report the [results](#) for the whole time period including both pre-COVID and COVID periods.

transitory with domestic tourist arrivals taking longer to return to their original trend. The seasonal autoregressive coefficient estimates are much lower, ranging from 0.464 in Istria to 0.853 in Zadar. In regards to foreign tourist arrivals, the differencing parameter,  $d$ , is much higher, ranging from 0.76 in Istria to 1.08 in Split-Dalmatia. With the exception of Split-Dalmatia, the point estimates of the differencing parameter,  $d$ , suggest foreign tourist arrivals are non-stationary but mean-reverting, whereas in the pre-COVID-19 period foreign tourist arrivals are stationary with mean reversion. Such behavior suggests that shocks will be transitory, but long-lasting. As in the case of domestic tourist arrivals, the foreign tourist arrivals also reveal elevated persistence levels and less prominent seasonality.

**[Insert Table 3 here]**

Next, we shift our analysis toward domestic and foreign overnight stays for the coastal counties during the pre-COVID-19 period as shown in Table 3. With the exception of foreign tourist overnight stays in Lika-Senj and domestic tourist overnight stays in Sibenik-Knin which include both intercept and trend terms, the model specifications for the rest of the counties only include an intercept term. The difference parameter,  $d$ , measuring the degree of persistence in the case of domestic tourist overnight stays ranges from 0.19 in Sibenik-Knin to 0.46 in Zadar. The point estimates of the differencing parameter,  $d$ , show domestic tourist overnight stays are stationary with mean reversion. The seasonal autoregressive coefficient estimates range from 0.929 in Lika-Senj to 0.984 in Primorje-Gorski kotar reflective of a strong seasonal component. With respect to foreign tourist overnight stays over this same period, the differencing parameter,  $d$ , ranges from 0.31 in Istria to 0.66 in Dubrovnik-Neretva. With the exception of Zadar, Split-Dalmatia, and Dubrovnik-Neretva, the point estimates of the differencing parameter,  $d$ , indicate foreign tourist overnight stays are stationary with mean reversion. The seasonal autoregressive

coefficient estimates for foreign tourist overnight stays range from 0.976 in Sibenik-Knin to 0.990 in Primorje-Gorski kotar.

**[Insert Table 4 here]**

By extending the estimation period to include the period of the COVID-19 pandemic (1998:1 to 2021:9), we observe in Table 4 the intercept terms are statistically significant with the time trend insignificant, as well as changes in the degree of persistence and seasonal behavior with respect to tourist overnight stays. In terms of domestic tourist overnight stays, the difference parameter,  $d$ , increases with a range from 0.46 in Lika-Senj to 0.80 in Split-Dalmatia. With the exception of Lika-Senj, the point estimates of the differencing parameter,  $d$ , indicate domestic tourist overnight stays are non-stationary, but mean-reverting. The seasonal autoregressive coefficient estimates decrease with a range from 0.632 in Istria to 0.913 in Zadar. In terms of foreign tourist overnight stays, the differencing parameter,  $d$ , is much higher, ranging from 0.97 in Istria and Sibenik-Knin to 1.20 in Dubrovnik-Neretva. With the exception of Istria and Sibenik-Knin, the point estimates of the differencing parameter,  $d$ , exceed one, indicative of non-stationary and non-mean reverting behavior. Such behavior suggests that shocks will be permanent in altering the trend path of foreign overnight stays. In comparing the results across domestic and foreign tourist arrivals and overnight stays, it appears the shock associated with the COVID-19 pandemic is more pronounced with respect to foreign tourist overnight stays.

### **3. Concluding Remarks**

Without question, the global COVID-19 pandemic has had a tremendous impact on the global tourism and hospitality industry. This disruption has been particularly significant for small open economies like Croatia which rely heavily on the tourism sector as a major source of export

revenues, and overall contribution to the country's GDP. Through the use of fractional integration techniques, this empirical study differentiates between the transitory and permanent nature of the COVID-19 shock with respect to domestic and foreign tourist arrivals and overnight stays across the seven Croatian coastal counties, which constitute almost 90% of the country's tourist arrivals and overnight stays. Such analysis is relevant for the use of historical information in the construction of models and generation of forecasts to project future tourism trends.

The results indicate an increase in the degree of persistence with the emergence of the COVID-19 pandemic alongside a decrease in the seasonal autoregressive component of the respective data. ~~Indeed, if. Since~~ the shock from ~~the~~ COVID-19 pandemic has elevated the degree of persistence associated with a shock in conjunction with the change in the seasonality observed, sustained marketing and promotion campaigns to restore tourism are warranted. ~~They should particularly focus on updates on the current COVID-19 situation and measures undertaken to ensure tourists a safe stay.~~<sup>6</sup> Moreover, consideration should be given to enhancing the sustainability of the tourism sector, both economically and environmentally, to mitigate future shocks. These considerations would include investment in the human capital employed in the tourism section, the information infrastructure, and the transportation sector and networks. Such investments should increase the resilience and sustainability of the tourism sector through regional diversification and specialization.

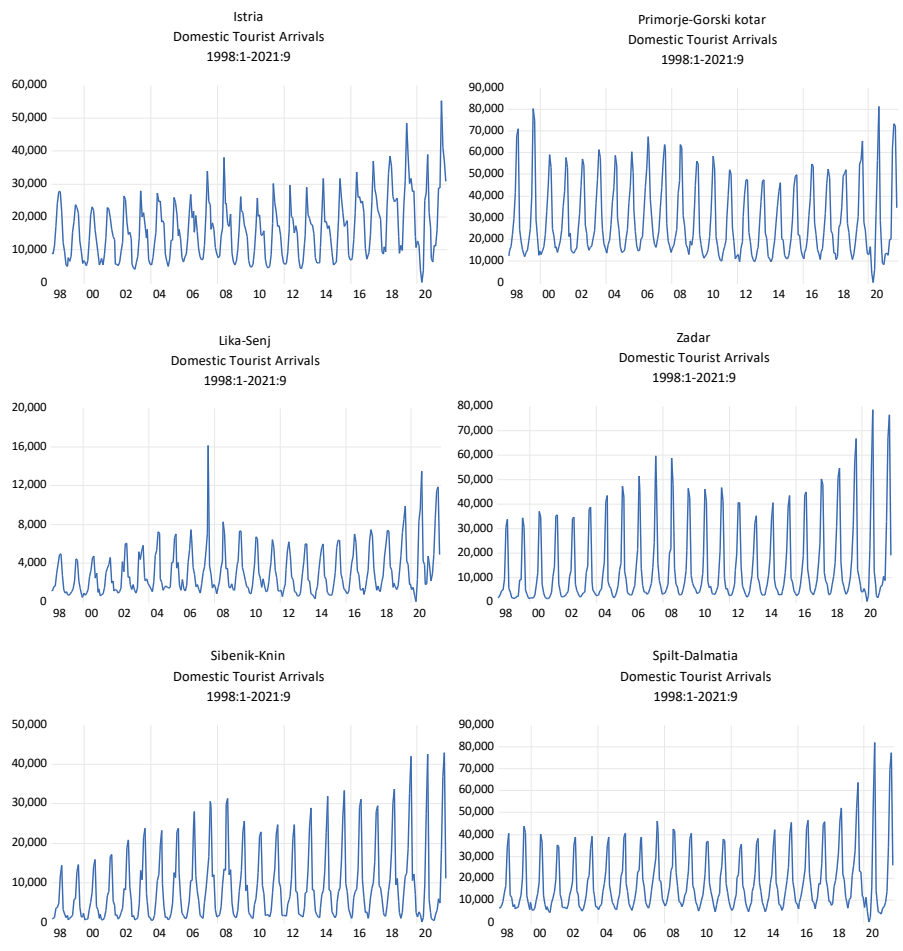
The degrees of persistence observed in our results during the pre-COVID are similar to those reported by Gil-Alana et al. (2015; 2016) and Apergis et al. (2017) ~~the~~with the order of

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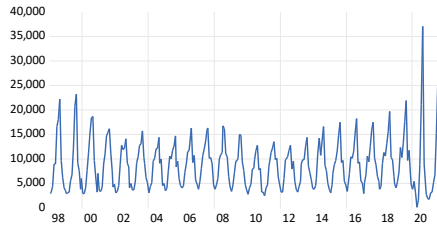
<sup>6</sup> In fact, in 2021 Ministry of Tourism and Sports introduced a promotion campaign „Stay safe in Croatia“ assigning such a label to all stakeholders in the tourist industry that were following strict prescribed health protocols.

integration ranging from zero to less than one. Likewise, with the inclusion of the COVID period, our results demonstrate some variation across the coastal counties, but the observed increase in the degree of persistence is similar to the studies by Payne et al. (2021) and Gil-Alana and Poza who also find an increase in the degree of persistence with the inclusion the COVID time period. Moreover, our results also indicate that as many of the previous studies illustrate, the effects of shocks on tourism-related time series are generally transitory with long-lasting effects. However, the COVID-19 pandemic may have changed the nature of the persistence in the data, the long-range dependence significantly increasing during this period.

**Figure 1. Domestic Tourist Arrivals**

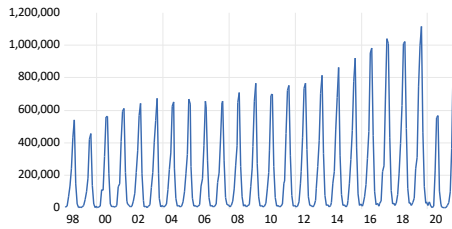


Dubrovnik-Neretva  
Domestic Tourist Arrivals  
1998:1-2021:9

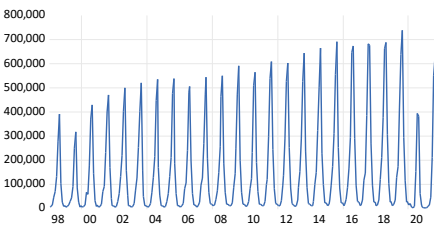


**Figure 2. Foreign Tourist Arrivals**

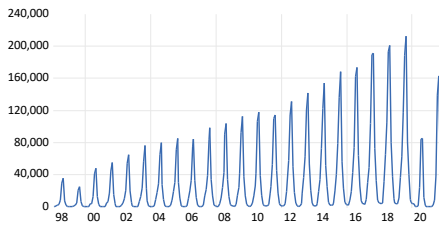
Istria  
Foreign Tourist Arrivals  
1998:1-2021:9



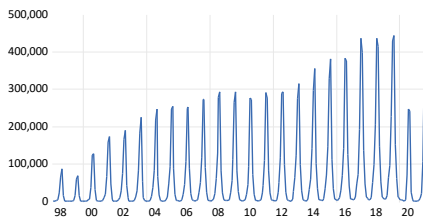
Primorje-Gorski kotar  
Foreign Tourist Arrivals  
1998:1-2021:9



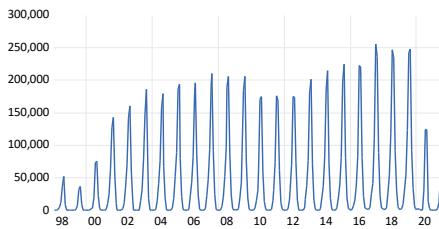
Lika-Senj  
Foreign Tourist Arrivals  
1998:1-2021:9



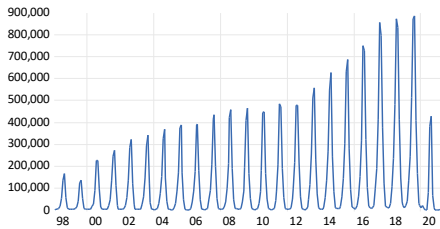
Zadar  
Foreign Tourist Arrivals  
1998:1-2021:9



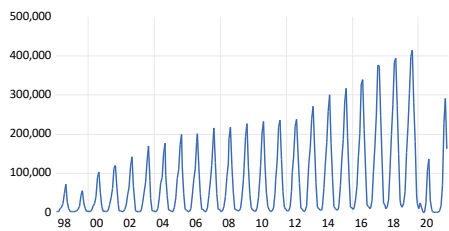
Sibenik-Knin  
Foreign Tourist Arrivals  
1998:1-2021:9



Split-Dalmatia  
Foreign Tourist Arrivals  
1998:1-2021:9

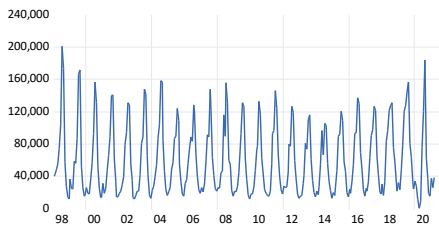


Dubrovnik-Neretva  
Foreign Tourist Arrivals  
1998:1-2021:9

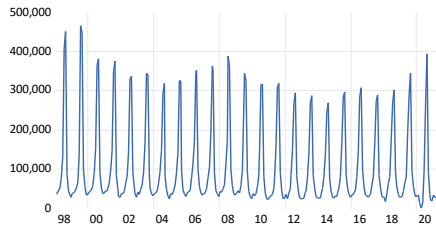


**Figure 3. Domestic Tourist Overnight Stays**

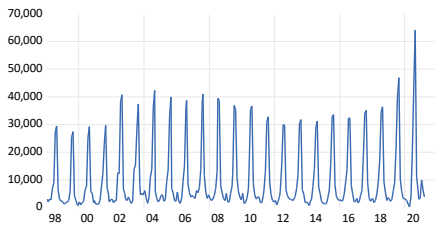
Istria  
Domestic Overnight Stays  
1998:1-2021:9



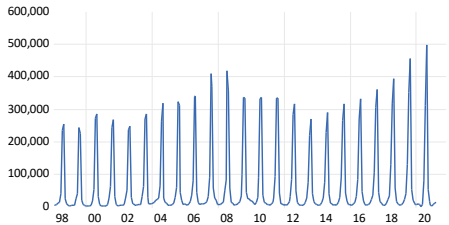
Primorje-Gorski kotar  
Domestic Overnight Stays  
1998:1-2021:9



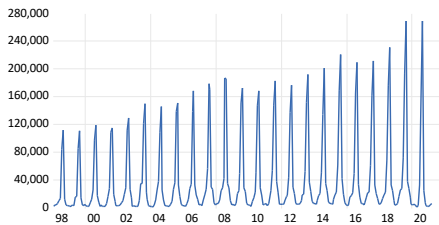
Lika-Senj  
Domestic Overnight Stays  
1998:1-2021:9



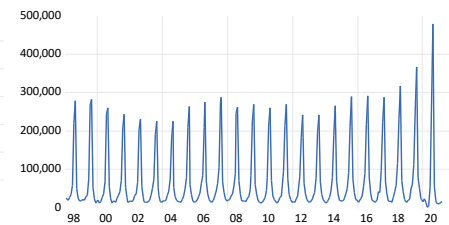
Zadar  
Domestic Overnight Stays  
1998:1-2021:9



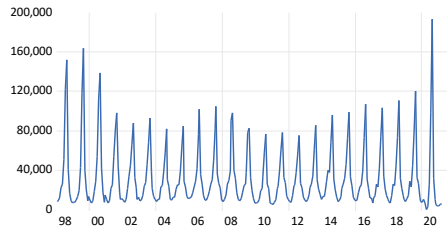
Sibenik-Knin  
Domestic Overnight Stays  
1998:1-2021:9



Split-Dalmatia  
Domestic Overnight Stays  
1998:1-2021:9

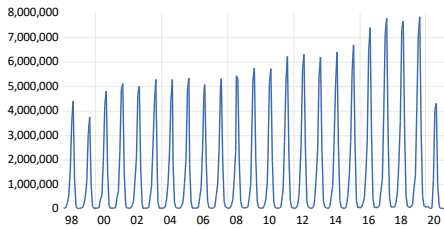


Dubrovnik-Neretva  
Domestic Overnight Stays  
1998:1-2021:9

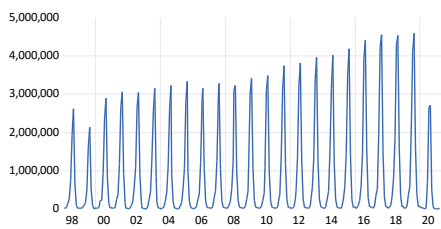


**Figure 4. Foreign Tourist Overnight Stays**

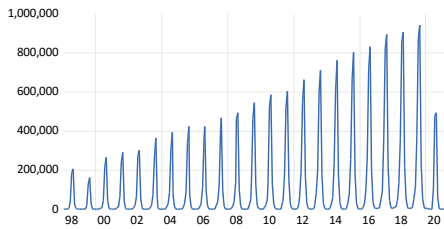
Istria  
Foreign Overnight Stays  
1998:1-2021:9



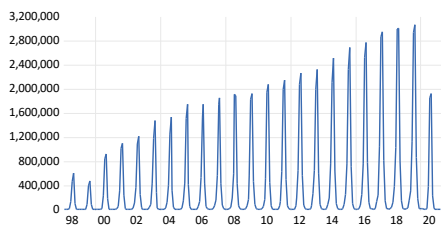
Primorje-Gorski kotar  
Foreign Overnight Stays  
1998:1-2021:9



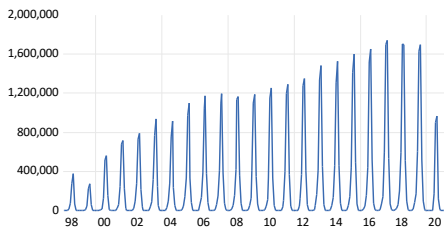
Lika-Senj  
Foreign Overnight Stays  
1998:1-2021:9



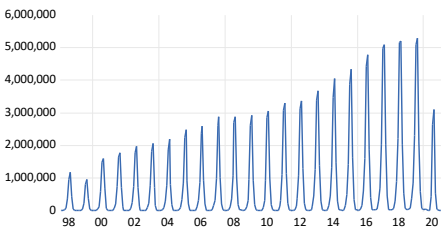
Zadar  
Foreign Overnight Stays  
1998:1-2021:9

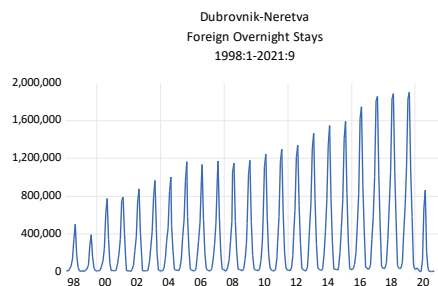


Sibenik-Knin  
Foreign Overnight Stays  
1998:1-2021:9



Split-Dalmatia  
Foreign Overnight Stays  
1998:1-2021:9





**Table 1**  
**Coefficients from Estimated Models for Arrivals**  
**Pre-COVID Period, 1998:1-2020:2**

Coastal County	Type	d (95% band)	Intercept (t-value)	Time Trend (t-value)	Seasonal AR
Istria	Domestic	0.40 (0.32, 0.51)	9.455 (50.64)	----	0.939
	Foreign	0.17 (0.07, 0.30)	10.623 (29.39)	0.0045 (2.01)	0.985
Primorje-Gorski kotar	Domestic	0.35 (0.25, 0.46)	10.040 (67.83)	----	0.959
	Foreign	0.42 (0.35, 0.49)	10.479 (20.19)	----	0.988
Lika-Senj	Domestic	0.32 (0.24, 0.41)	7.652 (43.79)	----	0.898
	Foreign	0.35 (0.24, 0.50)	7.362 (11.59)	0.0112 (2.68)	0.979
Zadar	Domestic	0.22 (0.12, 0.35)	8.468 (33.14)	0.0033 (2.06)	0.974
	Foreign	0.55 (0.48, 0.88)	7.495 (8.35)	----	0.980
Sibenik-Knin	Domestic	0.19 (0.08, 0.33)	7.953 (31.56)	0.0040 (2.57)	0.961
	Foreign	0.48 (0.41, 0.59)	7.633 (8.61)	----	0.968
Split-Dalmatia	Domestic	0.35 (0.27, 0.43)	9.456 (53.73)	----	0.971
	Foreign	0.69 (0.59, 0.81)	8.633 (8.98)	----	0.983
Dubrovnik-Neretva	Domestic	0.29 (0.20, 0.41)	8.855 (74.98)	----	0.935
	Foreign	0.64 (0.57, 0.75)	8.522 (10.93)	----	0.978

Notes: Selected models include intercept only and intercept with time trend.

**Table 2**  
**Coefficients from Estimated Models for Arrivals**  
**Full Period, 1998:1-2021:9**

<b>Coastal County</b>	<b>Type</b>	<b>d (95% band)</b>	<b>Intercept (t-value)</b>	<b>Time Trend (t-value)</b>	<b>Seasonal AR</b>
Istria	Domestic	0.66 (0.48,0.89)	9.278 (21.13)	----	0.464
	Foreign	0.76 (0.55, 0.95)	9.057 (8.16)	----	0.763
Primorje-Gorski kotar	Domestic	0.59 (0.40, 0.84)	9.798 (26.22)	----	0.587
	Foreign	0.93 (0.76, 1.12)	8.489 (8.78)	----	0.787
Lika-Senj	Domestic	0.41 (0.29, 0.58)	7.626 (27.96)	----	0.711
	Foreign	0.90 (0.71, 1.12)	6.015 (5.37)	----	0.739
Zadar	Domestic	0.57 (0.28, 0.80)	8.057 (13.88)	----	0.853
	Foreign	0.94 (0.78, 1.14)	5.369 (4.77)	----	0.811
Sibenik-Knin	Domestic	0.60 (0.42, 0.80)	7.424 (11.31)	----	0.797
	Foreign	0.94 (0.78, 1.12)	5.037 (3.88)	----	0.835
Split-Dalmatia	Domestic	0.66 (0.47, 0.88)	9.050 (19.65)	----	0.678
	Foreign	1.08 (0.90, 1.32)	7.993 (8.28)	----	0.810
Dubrovnik-Neretva	Domestic	0.56 (0.36, 0.79)	8.529 (22.70)	----	0.536
	Foreign	0.97 (0.80, 1.18)	7.733 (8.34)	----	0.711

Notes: Selected model with intercept only.

**Table 3**  
**Coefficients from Estimated Models for Overnight Stays**  
**Pre-COVID-19 Period, 1998:1-2020:2**

Coastal County	Type	d (95% band)	Intercept (t-value)	Time Trend (t-value)	Seasonal AR
Istria	Domestic	0.39 (0.28,0.54)	10.751 (44.74)	----	0.950
	Foreign	0.31 (0.23, 0.41)	12.516 (27.04)	----	0.978
Primorje-Gorski kotar	Domestic	0.34 (0.20, 0.50)	11.130 (48.48)	----	0.984
	Foreign	0.40 (0.32, 0.50)	11.933 (20.56)	----	0.990
Lika-Senj	Domestic	0.34 (0.24, 0.48)	8.5503 (28.88)	----	0.929
	Foreign	0.38 (0.24, 0.54)	7.965 (9.21)	0.0114 (1.97)	0.983
Zadar	Domestic	0.46 (0.34, 0.63)	9.603 (16.70)	----	0.965
	Foreign	0.53 (0.46, 0.64)	8.804 (8.46)	----	0.982
Sibenik-Knin	Domestic	0.19 (0.06, 0.33)	8.938 (27.33)	0.0046 (2.27)	0.964
	Foreign	0.49 (0.42, 0.58)	8.923 (8.68)	----	0.976
Split-Dalmatia	Domestic	0.35 (0.22, 0.50)	10.559 (38.76)	----	0.983
	Foreign	0.60 (0.51, 0.73)	10.452 (9.83)	----	0.985
Dubrovnik-Neretva	Domestic	0.33 (0.23, 0.46)	9.968 (10.76)	----	0.961
	Foreign	0.65 (0.56, 0.77)	9.857 (10.76)	----	0.981

Notes: Selected models include intercept only and intercept with time trend.

**Table 4**  
**Coefficients from Estimated Models for Overnight Stays**  
**Full Period, 1998:1-2021:9**

Coastal County	Type	d (95% band)	Intercept (t-value)	Time Trend (t-value)	Seasonal AR
Istria	Domestic	0.68 (0.50,0.92)	10.707 (20.26)	----	0.632
	Foreign	0.97 (0.81, 1.14)	9.774 (8.20)	----	0.856
Primorje-Gorski kotar	Domestic	0.67 (0.49, 0.88)	10.791 (19.00)	----	0.837
	Foreign	1.16 (1.02, 1.34)	9.818 (10.19)	----	0.888
Lika-Senj	Domestic	0.46 (0.33, 0.62)	8.430 (18.61)	----	0.848
	Foreign	1.06 (0.91, 1.24)	6.191 (5.08)	----	0.860
Zadar	Domestic	0.77 (0.57, 0.95)	8.742 (9.30)	----	0.913
	Foreign	1.12 (0.98, 1.28)	6.316 (5.40)	----	0.901
Sibenik-Knin	Domestic	0.70 (0.49, 0.89)	7.828 (8.58)	----	0.868
	Foreign	0.97 (0.83, 1.13)	6.891 (4.94)	----	0.906
Split-Dalmatia	Domestic	0.80 (0.62, 1.01)	10.184 (14.79)	----	0.877
	Foreign	1.15 (1.00, 1.34)	9.502 (9.03)	----	0.910
Dubrovnik-Neretva	Domestic	0.70 (0.50, 0.90)	9.393 (16.47)	----	0.748
	Foreign	1.20 (1.04, 1.40)	9.041 (10.31)	----	0.853

Notes: Selected model with intercept only.

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