

POST COVID EVOLUTIONS OF TOURISM IN MEMBER STATES OF THE EUROPEAN UNION. SIMILARITIES AND DISPARITIES

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Abstract

The free movement of people, the increase in the standard of living in the states of the European Union and beyond, the increase in free time, the increase in the appetite of individuals for travel, as well as the development of the specific infrastructure, have led in recent decades to a significant increase in tourist traffic and, implicitly, the development of the tourism industry, and adjacent industries, with significant effects at regional and local level. Unfortunately, the outbreak of the Covid-19 pandemic at the beginning of 2020 had a significant negative impact on tourist traffic and implicitly on the tourism industry both globally, regionally and locally. Although the resumption of tourist traffic took place gradually, at the level of the European Union states, significant differences were highlighted. Starting from this assessment, the paper performs a radiography of the evolution of tourist traffic in the European Union, between January 2018 and September 2022, highlighting the similarities and differences between the member states, from this point of view.

Keywords: *tourist traffic, Covid-19, tourist arrivals, tourist reception structure,*

Classification JEL: *C10, L83*

1. INTRODUCTION

In most modern economies, implicit in the development strategies of the European Union, tourism plays an important role [1], being a development factor at national, regional and local level [2-4], with an important role in sustainable development and growth of the standard of living of the population.

Unfortunately, this process was significantly affected by the outbreak, at the beginning of 2020, of the Covid-19 pandemic, with negative consequences especially on tourism [5,6], with major implications on the workforce [7], with reductions of over 50% in this area [8].

The analyzes carried out after the outbreak of the pandemic have brought to the attention of those involved in tourism a series of challenges regarding the traditional approach to the restoration

policy of tourism [9,10], versus new approaches such as virtual reality tourism, virtual tourism and augmented reality [11], as well as various ways of returning to normal, in the new conditions [12-14].

Taking into account these aspects, the main objective of the research carried out was, on the one hand, the impact of Covid-19 on the European Union tourism circulation, and on the other hand, the identification of the disparities and similarities between the member states in the process of returning to normal tourist circulation, both in terms of domestic and foreign tourists.

2. METHODOLOGY

To achieve the objectives of the paper, the main indicator analyzed was the arrivals in the tourist reception units with accommodation functions, from member states of the European Union in the period January 2018 – September 2022 [15]. Taking into account the available data, 25 of the 27 Member States were included in the research, in the case of Ireland and Bulgaria, there are large discontinuities in the data series.

In order to ensure the compatibility and comparability of the evolution of the phenomenon of tourist traffic, relative indicators were determined and used, i.e. tourist traffic indices from January 2019 to September 2022, with a fixed base in the corresponding months of 2018:

$$y_{k,i-12} = \frac{x_{k,i}}{x_{k,j_{2018}}}, i = \overline{13,57}, j_{2018} = \begin{cases} i \bmod 12, i \bmod 12 \neq 0 \\ 12, i \bmod 12 = 0 \end{cases} \quad [1]$$

In (1) $X \left[x_{k,i} \right]_{k=1,25, i=1,57}$ is the matrix of the number of tourist arrivals from the 25 analyzed states, between January 2018 and September 2022.

The normalized data series of the evolution of arrivals were also used:

$$z_{k,i} = \frac{x_{k,i} - \bar{x}_k}{\sigma}, \quad \bar{x}_k = \frac{\sum_{j=1}^n x_{k,j}}{n}, \quad \sigma = \sqrt{\frac{\sum_{j=1}^n (x_{k,j} - \bar{x}_k)^2}{n}} \quad [2]$$

In (2) $Z \left[z_{k,i} \right]_{k=1,25, i=1,57}$ is the matrix of normalized values of the number of tourist arrivals in tourist reception structures with accommodation functions in the period January 2018 - September 2022.

For testing the statistical significance of the parameters used, the main null hypothesis is: parameter does not differ significantly from zero; is not statistically significant ($t_s < t_{\alpha/2, df}$), where t_s is the value of the Student statistic calculated according to the data series whose parameter was determined, and df represents the degree of freedom. The 95% confidence coefficient ($\alpha=0.05$) was used to test the statistical hypotheses.

3. RESULTS AND DISCUSSIONS

Tourist circulation, both domestically and foreign tourist flows, was one of the areas most affected by the outbreak of the Covid-19 pandemic. Although this affected the tourism industry in all

the member states of the European Union, the amplitude of the impact, as well as the duration of its manifestation, differed from one member state to another.

3.1. The impact on domestic tourism

In terms of domestic tourism, the strongest fluctuations in tourist traffic occurred in relatively small states with a small number of inhabitants, including Malta, Cyprus, Luxembourg, as well as Slovenia. On the other hand, considering that in the case of Ireland there are significant discontinuities in the data series, only 22 EU member states were included in the domestic tourism analysis.

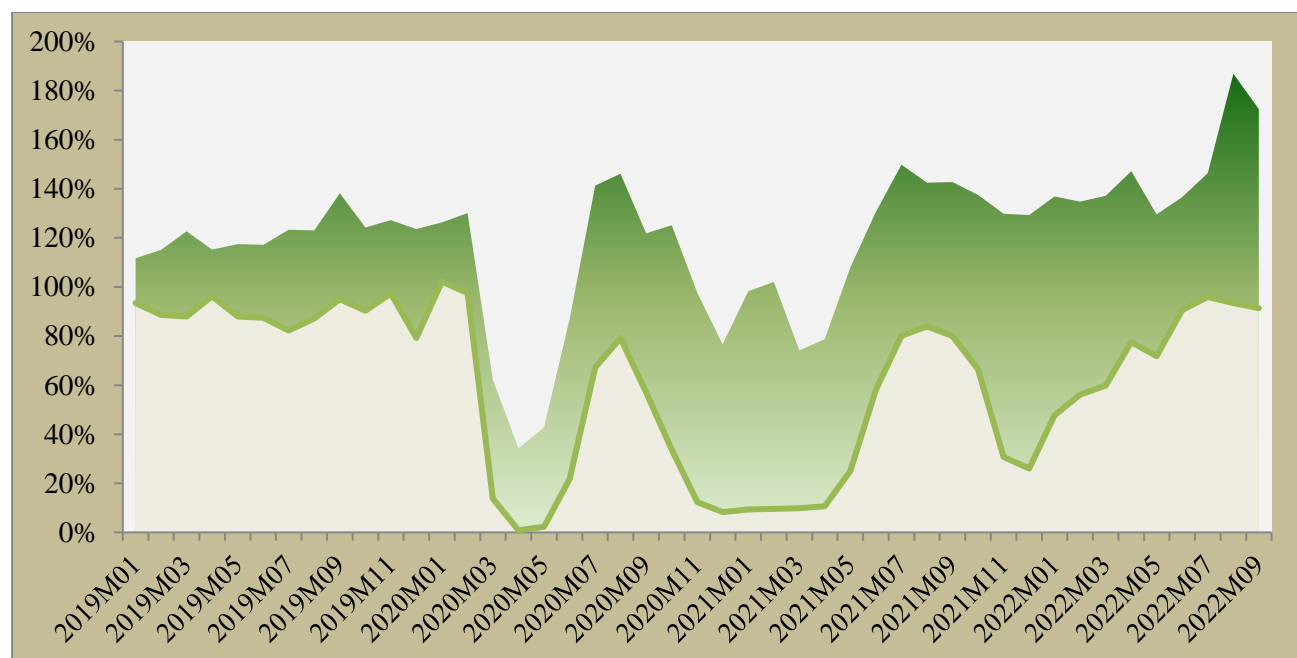


Figure 1. Evolution of the amplitude of the ratios between the monthly intensity of domestic tourist traffic from January 2019 to September 2022, in relation to the monthly values recorded in 2018

During 2019, compared to 2018, the monthly intensity of domestic tourist traffic, in the villages included in the analysis, was on a slightly upward trend, the average amplitude of the differences between the maximum and minimum values of the arrivals of domestic tourists in tourist reception structures being of 32.16 percentage points, highlighting a slight stability, a fact also highlighted by the graphic representation in figure 1.

The outbreak of the Covid-19 pandemic, in February 2020, as a result of the restrictive measures imposed, resulted in a significant reduction in the values of domestic tourist traffic. The relaxation recorded in the second part of 2020 led to some recovery, but the differences between the analyzed states increased significantly.

While in April 2020 their amplitude was only 33.36 percentage points, between a maximum of 62.26%, registered in Latvia, and a minimum of 0.89%, registered in Croatia, compared to April 2018, in October it reaches 91.36 percentage points, between a maximum of 125.14%, registered in Estonia, and a minimum of 33.78%, registered in Slovakia, compared to December 2018, which highlights significant differences between states regarding the relaunch of domestic tourism.

However, the relaunch of domestic tourist traffic, starting in 2021, does not lead to a stabilization of the relations between the states, existing in 2019, before the outbreak of the pandemic.

The differences between the analyzed states remain significant, so that, in August 2022, the gap was 93.47 percentage points, between a maximum of 186.9% registered in Lithuania, and a minimum of 93.44%, registered in Hungary.

It should be noted, however, that in August 2022, in 19 of the 22 states included in the analysis, the intensity of domestic tourist traffic was higher than in August 2018. Lower values were recorded only in Italy (96.25%), Hungary (93.44 %) and Romania (99.88%).

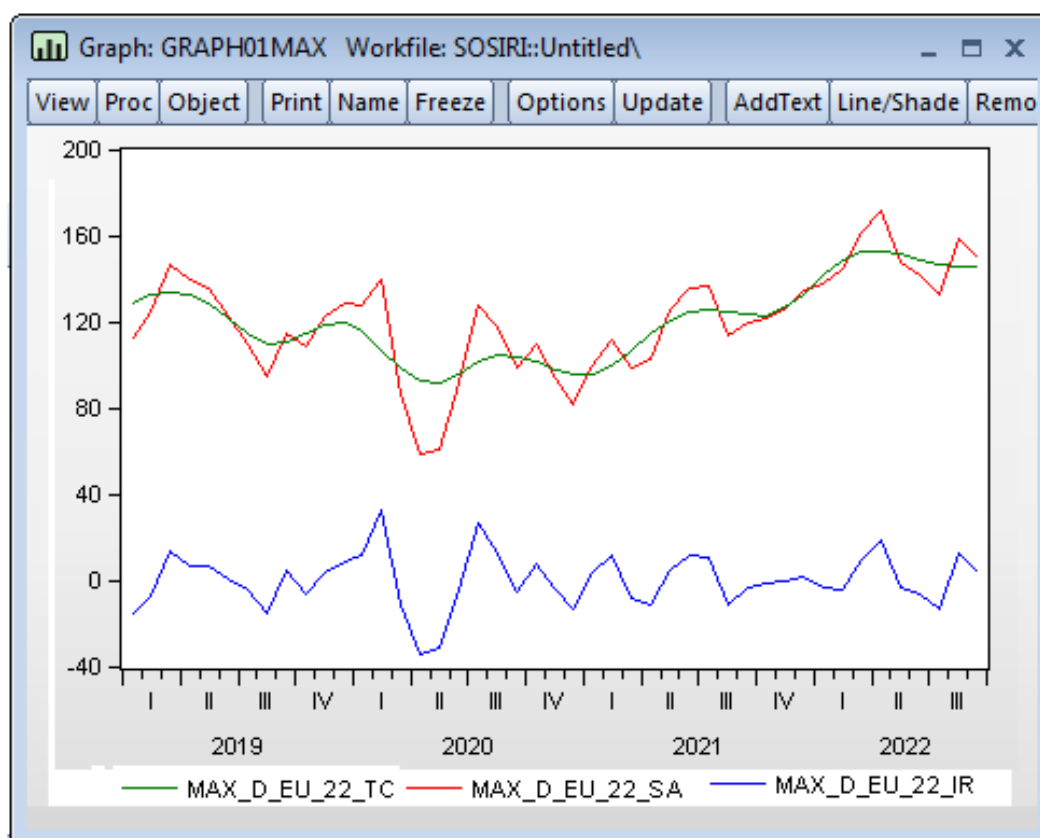


Figure 2 *The trend, seasonal adjustment and irregular components corresponding to the monthly indices, based on 2018, of the domestic tourist circulation*

The impact of the Covid-19 pandemic on the domestic tourist circulation in the analyzed states, both in the short term and in the long term, is highlighted by the component structures of the maximum and minimum values of the domestic tourist circulation compared to the values recorded in 2018.

The analysis of the components of the maximum values of domestic tourist traffic (Figure 2) highlights the very high influence of the irregular, random component (MAX_D_EU_22_IR) on the trend component, especially between the first quarter of 2020 and the second quarter of 2021, a fact that negatively influenced the stability of traffic tourism and implicitly of the tourism industry as a whole.

On the other hand, the Covid-19 pandemic highlighted yet another aspect of the disparities between the analyzed states from the point of view of the tourism industry and its ability to cope with disruptions.

Thus, the difference between the maximum and minimum values of the trend components (Figure 3) increased significantly, from 23.18 percentage points, recorded in January 2019, to 78.69 percentage points, in January 2021, and 74.17 percentage points, in September 2022.

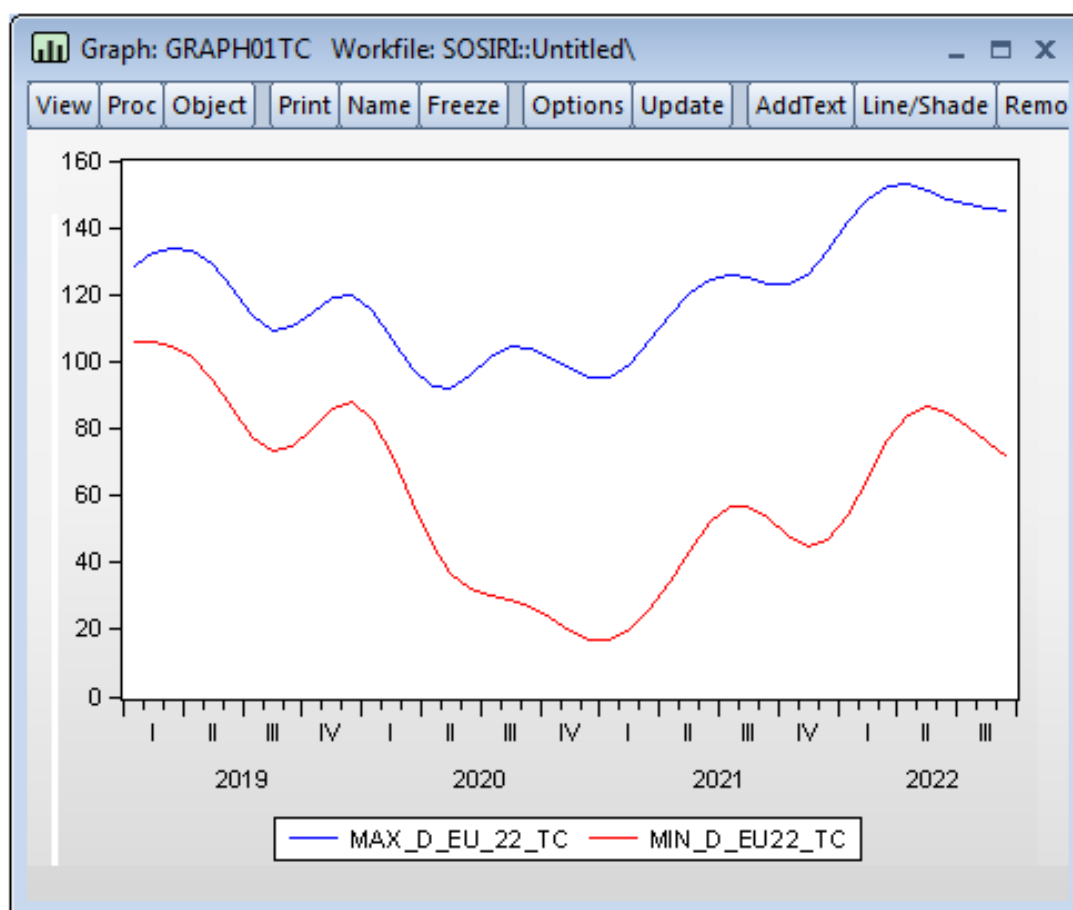


Figure 3 Trend evolutions corresponding to the maximum and minimum values of the monthly indices, based on 2018, of the domestic tourist circulation

A conclusion that results here is that, although the value at the end of the analyzed period (74.17 percentage points) is lower than the maximum value of the gap, recorded in the entire analyzed period (78.96 percentage points), the disparities between the EU member states in terms of regarding the ability to quickly adapt to changes in the environment, at least from the point of view of domestic tourism, they are significant.

3.2. The impact on foreign tourism

Significant differences between the 22 states included in the analysis, regarding the impact of Covid-19, are also evident on the arrivals of foreign tourists in tourist reception structures. The evolutions of the weights of the circulation of foreign tourists in the period January 2019, September 2022, compared to the monthly values recorded in 2018 (Figure 4), highlighted a collapse of them for almost a year and a half, the impact being much stronger than in the case of domestic tourism, both in regarding the maximum and minimum values recorded.

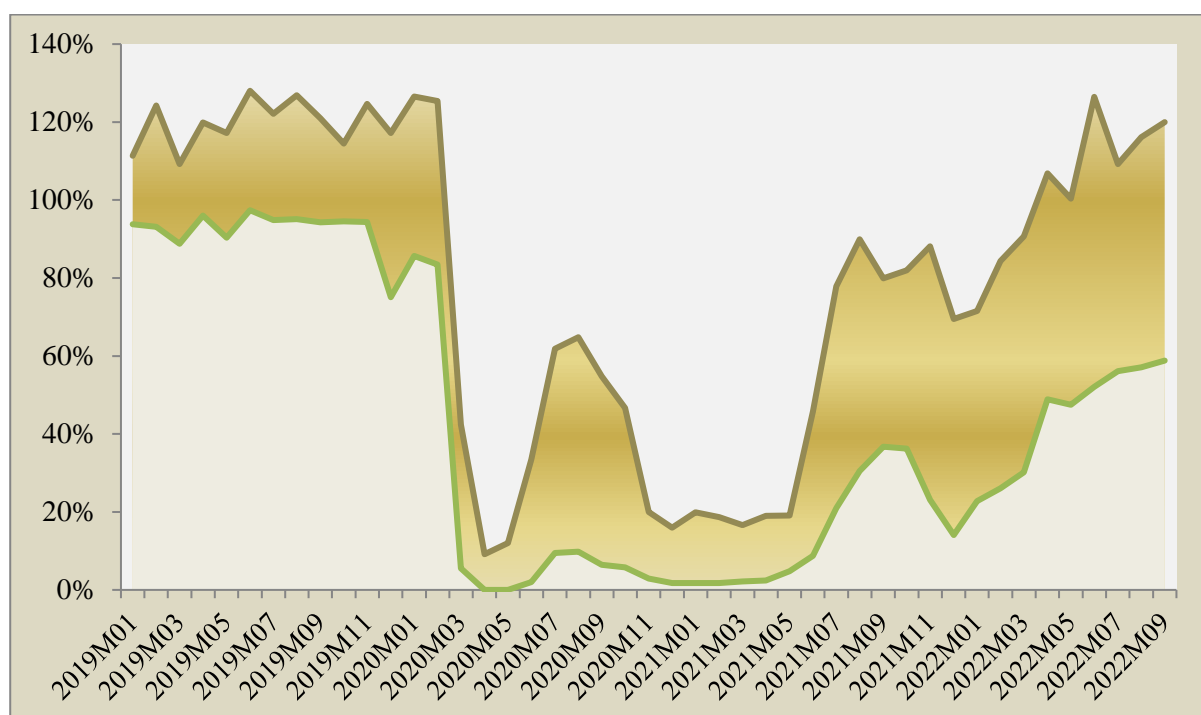


Figure 4. Evolution of the amplitude of the ratios between the monthly intensity of foreign tourist flows from January 2019 to September 2022, in relation to the monthly values recorded in 2018

During 2019, compared to 2018, the monthly intensity of the circulation of foreign tourists, in the states included in the analysis, was on a slight upward trend, the average amplitude of the differences between the maximum and minimum values of the arrivals of foreign tourists in tourist reception structures being 27.38 percentage points, showing a slight stability, a fact also highlighted by the graphic representation in figure 4.

As a result of the restrictive measures imposed in all states as a result of the outbreak of the Covid-19 pandemic, it led to the collapse of the values of the arrivals of foreign tourists in tourist reception structures, until their cancellation. Unlike domestic tourism, in the case of foreign tourists, the effective relaunch of tourist circulation only takes place in the second part of 2021 (one year later), the differences between the states being, however, also significant in this case.

Thus, in August 2021, if in Croatia the number of foreign tourist arrivals in tourist reception structures represented 89.95% compared to August 2018, and in Austria, 85.66%, in Finland it had reached only 30.47%, a difference of 59.48 percentage points.

Although, starting from the second half of 2021, the number of foreign tourist arrivals registers significant upward trends in all 22 analyzed states, the gaps between the extreme values increase, reaching 61.15 percentage points in September 2022, between a maximum of 119.94%, recorded in The Netherlands, and a minimum of 58.79%, registered in Romania.

On the other hand, while in countries such as Denmark, Greece, Spain, the Netherlands or Portugal the number of foreign tourist arrivals in tourist reception structures exceeded the values recorded in 2018, in Romania the values recorded barely exceeded 50% of those recorded in 2018.

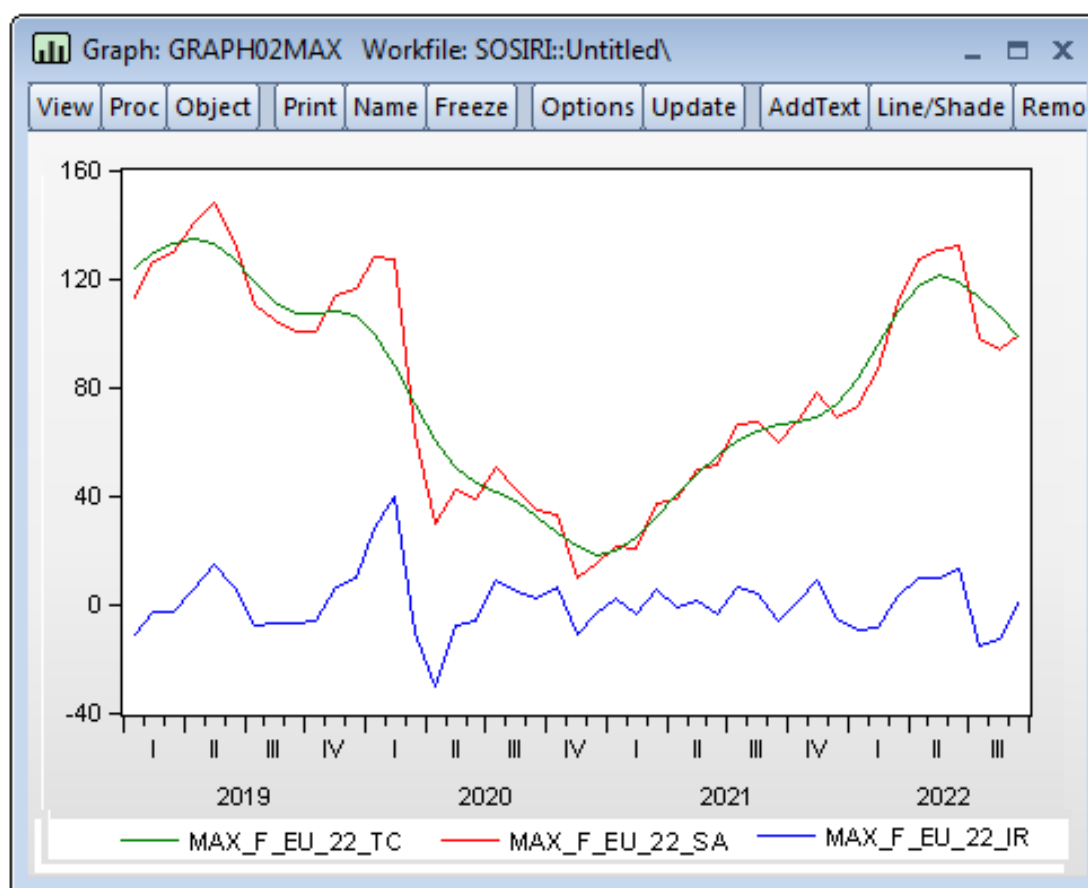


Figure 5 *The evolution of the trend, seasonal adjustment and irregular components corresponding to the monthly indexes based on 2018 of the circulation of foreign tourists*

As in the case of domestic tourism, the impact of the Covid-19 pandemic on the arrivals of foreign tourists, both in the short term and in the long term, are highlighted by the component structure of the maximum and minimum values of the domestic tourist circulation (Figure 5). Unlike domestic tourism, in this case the random component (MAX_F_EU_22_IR), starting from 2021, has much smaller amplitudes and, consequently, its influence on the trend component (MAX_F_EU_22_TC) is much smaller.

At the same time, the influence of the Covid-19 pandemic on the disparities between the states analyzed from the point of view of the tourist circulation of foreign tourists is significant. In this case, two developments stand out.

A period of reduction of disparities from 50.31 percentage points, in January 2019, to 18.04 percentage points, in 2021, determined by the measures imposed in the EU regarding the reduction of tourist traffic between member states and not only, followed by a period of increasing differences between the maximum and minimum values of the trend components (Figure 6), during the period January 2021 – September 2022, the amplitude of the gap reaching 51.13 percentage points, with 0.72 percentage points compared to January 2019.

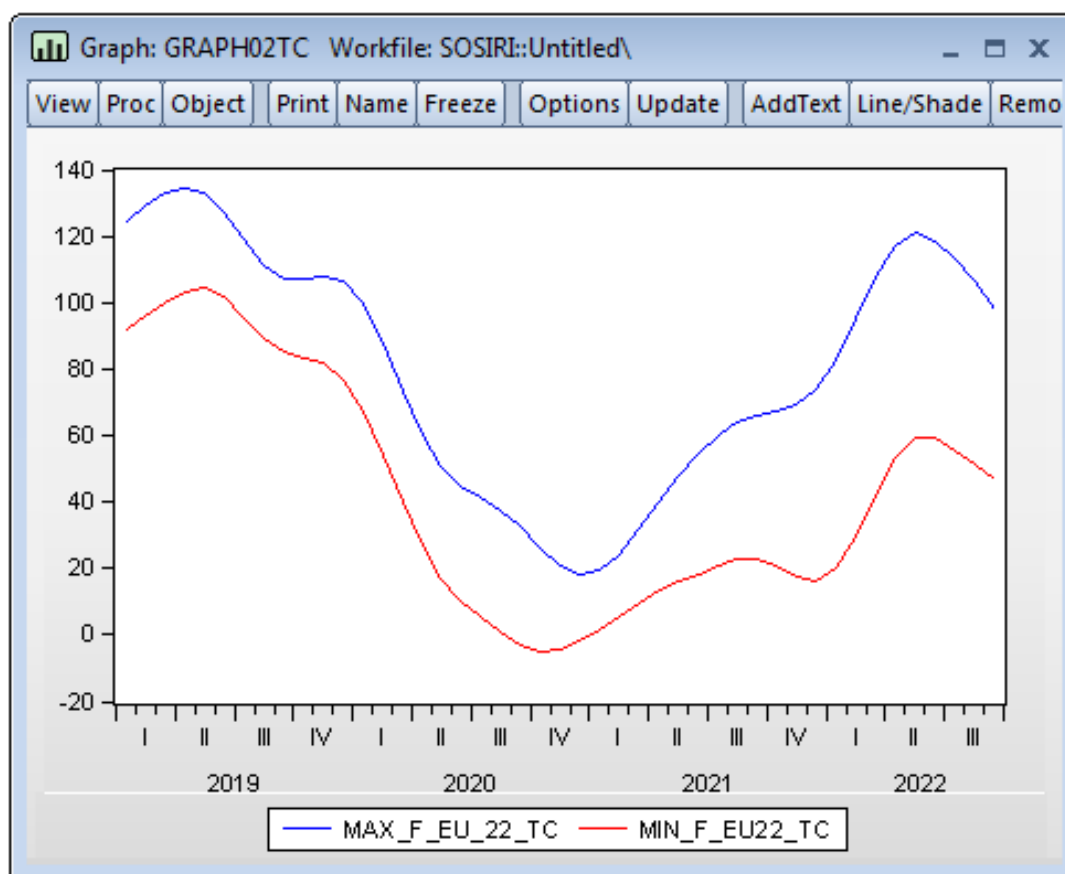


Figure 6 Trend evolutions corresponding to the maximum and minimum values of the monthly indexes based on 2018 of the circulation of foreign tourists

Regarding the impact of the Covid-19 pandemic on the disparities between the analyzed states, from the point of view of relaunching the tourist circulation of foreign tourists, it recorded deviations from the general upward trend of smaller amplitude than domestic tourism, which highlights the tendency to return to stability, but maintaining the gaps between the analyzed states at the level of the period before the outbreak of the pandemic.

CONCLUSIONS

The obtained results highlight the major impact that the Covid-19 pandemic had on tourist circulation in the analyzed states not only through the drastic reduction of its values but also through the disturbances triggered, and which have not yet led to a stabilization of this process, especially in regarding domestic tourism

Large and very large amplitude oscillations of the random component are also highlighted, in addition to those determined by seasonality, with effects on the stable operation of tourism industries. Their amplitude is significantly higher in relatively small states such as Cyprus, Malta, Luxembourg, as well as in Slovenia.

On the other hand, there were significant differences between the analyzed states in terms of the duration of the return process of tourist traffic, both in terms of domestic tourism and of foreign citizens. Nevertheless, tourism, in terms of the amplitude of the tourist circulation, in the last year recorded higher values than those recorded before the outbreak of the pandemic.

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