Routledge
Taylor & Francis Group

Economic Research-Ekonomska Istraživanja

ISSN: (Print) (Online) Journal homepage: https://www.tandfonline.com/loi/rero20

The relationship between tourism and employment: evidence from the Alps-Adriatic country

Laura Južnik Rotar, Sergej Gričar & Štefan Bojnec

To cite this article: Laura Južnik Rotar, Sergej Gričar & Štefan Bojnec (2023) The relationship between tourism and employment: evidence from the Alps-Adriatic country, Economic Research-Ekonomska Istraživanja, 36:1, 2080737, DOI: 10.1080/1331677X.2022.2080737

To link to this article: https://doi.org/10.1080/1331677X.2022.2080737

Published online: 08 Jun 2022.

ECONOMIC RESEARCH-EKONOMSKA ISTRAŽIVANJA
2023, VOL. 36, NO. 1, 2080737
https://doi.org/10.1080/1331677X.2022.2080737

The relationship between tourism and employment: evidence from the Alps-Adriatic country

Laura Južnik Rotar[a], Sergej Gričar[b] and Štefan Bojnec[c]

[a]Faculty of Economics and Informatics, University of Novo mesto, Novo Mesto, Slovenia; [b]Faculty of Business and Management, University of Novo mesto, Novo Mesto, Slovenia; [c]Faculty of Management, University of Primorska, Koper, Slovenia

ABSTRACT

Overlooking the importance of non-stationarity and normally distributed models in previous studies, this paper aims to fill the gap in literature based on time series between 2000 and 2019 for an Alps Adriatic country on tourism-led employment. Before implementing the Granger Causality Test, the vector autoregressive model is applied. The results confirmed that tourist arrivals significantly impact the hospitality labour market in Slovenia as employment in the lodging industry was driven in bi-causal directions to overall tourist arrivals. The demonstrated validity of substantial tourism-led employment has implications for job creation and economic growth, focusing on domestic tourists.

ARTICLE HISTORY
Received 18 September 2021
Accepted 17 May 2022

KEYWORDS
Employment; Granger Causality; hospitality labour market; Slovenia; time series; tourist arrivals

JEL CODES
C22; J21; J24; J49

1. Introduction

The hospitality industry and its labour market pertinent to the Alps-Adriatic region lack sufficient research questions. This article extends previous literature on the hospitality industry labour market, precisely the significance of macroeconomic non-stationary and normally distributed models in the lodging sub-industry. Gričar and Bojnec (2018) report that the tourism industry plays an essential role across the Alps-Adriatic countries, especially in the Slovenian national economy. The Slovenian tourism industry contributed 5.3% of the country's total gross domestic product (GDP) and constituted 7.7% of the total number of employees (OECD (Organisation for Economic Cooperation & Development), 2020). In addition to natural, historical and cultural attractions, visitors' motivations include sports, science, politics and businesses. These visitors demand high-quality tourist services, where responsibility lies on employees and tourism linked activities. Due to increasing tourist demands, Slovenian tourism growth was driven by intensive and extensive developments that prompted social, economic and environmental sustainability of carrying capacities. This question can justify the role of public policy in providing a stable

CONTACT Laura Južnik Rotar laura.juznik-rotar@uni-nm.si

macroeconomic and institutional framework, tourism infrastructure and facilities (Tugcu, 2014).

Based on the importance of the tourism industry, we proposed to investigate its contribution to overall Slovenian employment. In 2017, wages and salaries represented 42.3% of Slovenia's total GDP. The compensation of employees in tourism lodging and food and beverage sub-industries was 512.2 million euros (SORS (Statistical Office of the Republic of Slovenia), 2021). In the context of tourism labour, it is crucial to be aware that employees can play a crucial role in serving tourist arrivals (Gebbels et al., 2020; Rowley & Purcell, 2001).

The specific motivation for the present research is to analyse time series secondary data on the relationship between tourism and employment using a contemporary applied econometric methodology. This motivation arises from the research goal where Slovenian overall employment and employment in the hospitality industry is linked to the domestic and foreign tourist arrivals. The objective is to provide empirical evidence on the causality between tourism labour market and overall employment in Slovenia as an Alps-Adriatic country. The Granger Causality test contributes to the empirical literature on the Slovenian hospitality industry labour market with the following four specific objectives. First, to introduce the most recent literature overview on the applied secondary data referring to causalities between tourism demand and employment. Second, to analyse ways of causalities for the domestic labour market and domestic tourist arrivals. Third, to calculate ways of causalities for the tourism labour market and tourist arrivals, both domestic and foreign ones. Finally, to determine all other combinations of the causalities between the analysed variables.

Slovenia is a country with transitional climate areas. It is located between i) the Alps to the north and bordered by Austria and Italy; ii) Adriatic Sea (Mediterranean) to the west and bordered by Italy and Croatia; iii) Dinaric Alps to the south, where it borders Croatia and; iv) the Pannonian Valley to the east and borders Hungary. As stated by the United Nations World Tourism Organization (UNWTO) and International Labor Organization (ILO) in their joint publication (2014), tourism industries are contingent not only on natural resources, infrastructure and capital but, to a large extent, of labour. The latter should also be considered human capital and an essential factor for economic growth. Following the quantitative policy orientation, there is a need for evidence-based policymaking in the field of tourism and its employment potential. There is a lack of time series data studies to investigate the tourism industry's contribution to employment. The existing studies mainly focus on a one-way effect from tourist arrivals to employment which only reveals partial information on the relationship between tourist arrivals and employment (Qin et al., 2020).

This paper contributes to the literature by exploring the bi-directional nature of the relationship between tourist arrivals and employment. To avoid spurious outcomes and improve the correctness of the causality, we apply the vector autoregression model and implement the Granger Causality Test in the Slovenian hospitality industry labour market, where structural employment by tourism sub-industry is analysed. This step is a particularly challenging issue, an opportunity to fill the gap in the relevant literature and encourage further research in this field. The proposed

relationship between tourism and employment is contextualised in a manner of the traditional economic theory of the labour market.

Finally, the sample of Slovenia provides a specific framework on foreign and domestic tourist arrivals led to employment. Assaf and Cvelbar (2011) argue that Slovenia has a long history and tradition in the hospitality industry. In the light of the disruption caused by Covid-19 international tourist arrivals fell by nearly 75%, whereas cross-border travel will not recover to pre-covid levels until 2023 at the earliest and, more likely, 2024 (Gričar et al., 2022; *The Economist*, 2021). Therefore, focusing on domestic tourist arrivals and re-discovering their needs should be at the forefront of strategic tourism orientation besides adapting to remaining restrictions to provide a safe and sustainable environment (Gričar et al., 2021). From the empirical and practical point of view, the paper contributes an applicable framework to consider differentiated gains of domestic and foreign tourist arrivals and engage these gains with the tourism employment domain. The remains of the paper are structured as follows. The following section examines literature reviews. The third section applies the unit root tests that determine whether the time series is deterministic or stochastic. The fourth section includes models and presents the results of the research. The penultimate section discusses our results, leaving the final section to conclude.

2. Literature review and hypotheses development

2.1. Review of previous studies

Aratuo et al. (2019) confirmed that economic growth in all six tourism sub-industries in the United States (US) and labour is crucial in the hospitality industry. So far, there are limited studies related to the hospitality labour market of Alps-Adriatic countries. Moreover, research is even scarcer for time series data analysis (Baggio & Sainaghi, 2016). O'Donnell (1970) recognised the importance of tourism industry employment and set the foundation for measuring employment generated by the tourism industry, which helped several international institutions develop standards in the field. Furthermore, various researchers attempted to study the relationship between tourism and employment (Ahlert, 2008; Brown & Connelly, 1986; Elkan, 1975; Farver, 1984). Williams and Shaw (1988) took the discussion on tourism-led employment further by promoting tourism as 'a hope for employment growth in the United Kingdom (UK)'. Authors highlight the need for further detailed industry examination, with particular attention paid to tourism-led employment. New directions in the growth of tourism employment have been studied by Townsend (1992), suggesting the employment potential of urban tourism and low-income regions to regions with better job opportunities (Tosun et al., 2021). Due to the explored complexities of tourism labour markets, the literature suggests a multidisciplinary research approach promoting dialogue between different perspectives on tourism labour markets (e.g. Baum et al., 2016; Ladkin, 2011). According to UNWTO and ILO (2014), the economic impact of tourism industries on employment can be summarised as direct employment in tourism industries, indirect employment in the sectors supplying inputs to the tourism industries, induced effect on employment as a result of

spending, and total effect on employment via employment multiplier in the tourism industries indicating an effective way of dealing with unemployment. Despite foreseen tourism-led employment opportunities, employment in tourism industries, according to UNWTO and ILO (2014), has been one of the least explored strands of tourism (Baum, 2018; Robinson et al., 2014; Shakeela et al., 2011; Solnet et al., 2014).

Table 1 summarises studies and results regarding (un)employment and the tourism industry. Additionally, Alegre et al. (2019) investigated the effects of not going on

Table 1. A literature review on (un) employment in the tourism industry.

Author	Methodology	Key findings
Object: Employment		
Ying Mei (2019)	Explorative study	Discuss the gaps between tourism education and the tourism industry and highlight the need for the spheres mentioned to collaborate more intensely to provide skills needed in the tourism labour market.
Fang et al. (2016)	OLS	Penetration on sharing economy and employment.
Prasad and Kulshrestha (2015)	Input-output analysis	Derivation of employment multiplier through which positive tourism sector employment generation has been recognised.
Object: Economic factors, demand		
Line and Hanks (2019)	Survey	The factors influencing hotel performance also include social servicescape.
Cvecic and Sokolic (2018)	Dynamic panel data with the generalised method of moments (GMM)	Public expenditure in labour market policies has statistically significant positive effects on unemployment rates.
Object: Methodology		
Aratuo et al. (2019)	Granger causality	Results confirm the tourism growth hypothesis assuming homogeneity of tourism sectors. Additionally, the lodging and tourism industries should also point to the food, shopping, and leisure industries.
Robinson et al. (2019)	Meta-analysis	Employment practices in the tourism industry boost precarious tourism employment.
Winchenbach et al. (2019)	Meta-analysis	Interlinkage and application of dignity in tourism employment is an essential factor in assessing workplace experiences but has limited application in tourism employment.
Dogru and Bulut (2018)	Granger causality	The tourism industry plays an integral part in the national economy of several EU countries.
Baggio and Sainaghi (2016)	Time-series	Results divulge four points extracted from time-series breakpoints.
Carvalho et al. (2014) and Campos-Soria et al. (2015)	Matching employee-employer dataset	Tourism employment reflects gender differences: more educated women are less likely to hold executive and management positions in the tourism industry and earn less money than men.
Thulemark et al. (2014)	Longitudinal data	Tourism employment acts as a pull factor for in-migration.
Tugcu (2014)	Panel causality	The causality results between economic growth and the tourism industry in Europe are mixed.

Source: Compiled by authors' desk research.

holidays correlated with unemployment during the economic crisis in a set of European Union (EU) countries. They found that this effect emerges when there is an unemployment rate of over 10%. Alternatively, Dogru and Bulut (2018) recognised that the tourism industry helps EU countries to recover from economic crises.

Perles-Ribes et al. (2016) aimed to determine the effects of the economic crisis on unemployment rates in Spain's residential or hotel tourism destinations based on a pool of 138 tourist destinations. They conclude that residents faced the more severe consequence of decreased employment than of hotel destinations. On the other hand, Robinson et al. (2019) suggest a three-dimensional model that includes the impact of job locations on tourism employment decisions addressing multi-dimensional issues of tourism employment challenges. Filimonau and Mika (2019) provide an overview of possible trends related to Brexit with implications of returning Polish tourism workers from western parts of the EU, e.g. the UK, to East-Central Europe, e.g. Poland.

Using spatial econometric techniques to model tourism and hospitality employment clusters, Chhetri et al. (2017) concluded that employment in rural tourism regions in Australia is more concentrated in operational tourism services. In contrast, city-based regions have high levels of employment in hospitality services.

Brandt (2018) investigated wage determinants of individuals employed full time in the Swedish tourism sector based on different panel data models. He confirms the positive effects of tourism on employment. On the other hand, he shows evidence of lower incomes of individuals employed in tourism industries than in the rest of the economy. Similar conclusions concerning the perception of jobs can be found in Che Ahmat et al. (2019).

Castillo et al. (2015) analysed the relationship between tourism policies and employment using a synthetic control method and combined it with econometric approaches of programmed treatment evaluation, allowing flexibility to control for different cofounders and checking the robustness of results. Findings from Castillo et al. (2015) study support public intervention in tourism as tourism employment substantially increased with the implementation of tourism development policy. The latter is particularly relevant for the debate on the effectiveness of tourism policies using modern micro econometric approaches (Južnik Rotar, 2019). Moreover, Winters et al. (2013) justify public intervention in tourism to promote tourism employment, which is seen as a rational policy choice that provides economic benefits of tourism to local employment development to a socially optimal level. In addition, investment in the tourism economy can reduce local poverty mainly through job creation.

Therefore, tourism-led employment is seen as a strategic alternative that involves long-term considerations of the hospitality labour market and human resource developments (Li et al., 2017: Radjenovic, 2019). Jobs created or maintained within tourism industries can help counteract economic decline and contribute to employment and economic growth (Badulescu et al., 2021; Brida et al., 2016; Cheng et al., 2021; Ferrari et al., 2022; Haller et al., 2021; Witt et al., 2004). According to Dogru and Bulut (2018), the tourism industries, such as accommodation, were amongst those service sectors that have recorded a positive average annual growth rate of employment since the severe economic crisis in 2008. There is potential for hospitality to

contribute to local employment development and growth of less developed and remote areas. Based on the generalised method of moments and Granger causality tests in panel data models Šergo (2019) concludes that the tourism industry across the EU positively impacts employment.

2.2. Hypotheses development

Considering literature reviews and the noticeable lack of time series data studies to investigate tourism-led employment, the contribution of our research is an investigation of the hypothesis on cointegration and causality between employment rates in a specific tourism sub-industry analysed by domestic tourist arrivals and foreign tourist arrivals in Slovenia where inflation is introduced as an exogenous variable (ex). We have set up the following tourism-led employment hypotheses ($H_{\boldsymbol{A}}$):

The null hypothesis H_{A_0} : Tourism-led employment does not cause overall economic employment. The opposite of the alternate hypothesis H_{A_1} : Tourism-led employment does cause the overall economy employment. The hypothesis is derived from literature to capture the stylised empirical fact on the causality between tourism lodging sub-industry variable that has been isolated from the overall economy employment variable. We would like to capture all vital data information because losing information could lead to spurious results (Juselius, 2017). The tourism sub-industry variable captures the employment in tourism sub-industries. Alternatively, the economic employment variable in Slovenia includes employment in all economic sectors, including the hospitality industry.

Moreover, the article contributes to the theory of applied econometric analysis that the tourist arrivals have been isolated to analyse tourism-led employment rather than tourism-led growth by GDP. Additionally, the results suggest that foreign and domestic tourist arrivals are essential for sustainability in hospitality employment. Therefore, additional hypotheses $H_{\boldsymbol{B}}$ and $H_{\boldsymbol{C}}$ could be tested.

A body of literature has developed a hypothesis on causality between tourist arrivals and employment in the tourism economy (Table 1). Following this strand of literature, we set the following hypothesis $H_{\boldsymbol{B}}$: The null hypothesis H_{B_0} : Tourism-led employment does not cause the overall tourist arrivals, e.g. foreign and domestic ones.

The opposite of the alternate hypothesis H_{B_1} : Tourism-led employment does cause the overall tourist arrivals, e.g. foreign and domestic ones, and vice versa, or the two-way causal relationship exists. A causal relationship can exist between the overall economy employments as an indication of an economic cycle in a labour market of the economy and thus caused domestic tourist demands. In addition to the cyclical nature of the labour market and tourism demand, this causality can also be seasonally driven. On this basis, we set the following hypothesis $H_{\boldsymbol{C}}$:

The null hypothesis H_{C_0} : Overall economy-led employment does not cause domestic tourist arrivals. The opposite of the alternate hypothesis H_{C_1} : Overall economy-led employment does cause domestic tourist arrivals, and vice versa or the two-way causal relationship exists.

3. Data

For the empirical analysis, we used the secondary monthly time series data for the studied variables obtained from the Statistical Office of the Republic of Slovenia (SORS (Statistical Office of the Republic of Slovenia), 2021). In contrast, the importance of data availability in tourism employment has been studied by Koens and Wood (2017).

The data vector ranges for the period between January 2000 and September 2019 for the following four variables: number of employed persons in Slovenia (EMP_t^{SI}), number of employed persons in the tourism industry (EMP_t^{tour}), domestic tourist arrivals ($TOUR_t^d$) and foreign tourist arrivals ($TOUR_t^f$). We opted for credible results. Therefore, we use unadjusted data (i.e. neither seasonally adjusted nor calendar adjusted data) (Figure 1), because we want to study the capacity of what the data tell us without losing the participated information (Gričar & Bojnec, 2018; Juselius, 2011). The consumer price index (*CPI*) is introduced as an exogenous control variable (ex).

Table 2 presents descriptive statistics on-chain indices, and thus it becomes more valuable to suggest the management (trend observation) and research (successive multiplication) implications. Results indicate that none of the studied variables is normally distributed and thus confirms the empirical fact of non-stable macroeconomic and hospitality variables. The non-normality in distribution is expressed by skewness and kurtosis, where the results are away from the i.i.d. zero and three, respectively. Variables of tourist arrivals have high maximum and lowest minimum values. Employment in the hospitality industry has greater density than employment in the Slovenian economy; the maximum rates are 117.45 and 112.41, respectively. The minimum value for employment in the tourism sub-industry is slightly lower than in the Slovenian economy.

3.1. Methodology

The hospitality and macroeconomic time series variables are analysed using regression analysis and the Granger causality test's causal relationship. With the multiple regression analysis, we aim to find function $y = f(x)$, which best captures the mutual relationships between the analysed variables:

$$Y_t = \alpha + \beta_i \cdot X_{tj} + \varepsilon_{Hi}, \tag{1}$$

where Y_t is a dependent variable for the employment of active persons in the hospitality industry EMP_t^{tour}, X_t are explanatory variables for EMP_t^{SI}, $TOUR_t^d$, *and* $TOUR_t^f$, *whilst* α is an investigating constant. *Hi* is hypothesis analysed, *j* represents country Slovenia, and ε are undefined errors.

EMP_t^{SI} is taken as a determinant to capture the employment capacity of the tourism industry. We expect that a more significant number of tourist arrivals is positively connected to employment rates in hospitality, which can maintain and create new jobs in the economy because tourism demand can improve the capacity to absorb workers.

Table 2. Descriptive statistics.

Variable	Mean	Median	Maximum	Minimum	Skewness	Kurtosis
EMP_t^{SI}	104.61	103.12	113.56	98.92	0.86	−0.41
EMP_t^{tour}	107.47	106.21	126.04	99.28	0.85	0.02
$TOUR_t^d$	181.67	168.78	382.97	96.26	0.98	0.65
$TOUR_t^f$	327.27	261.52	1591.80	86.39	2.37	7.23
CPI_t	152.09	155.86	201.72	100.00	−0.07	−0.41

Note: all variables are expressed as *chain indices* $= X_{t,\ 0}^{lr} \cdot X_{t-1}^{lr}/100$ where January 2000 = 100 and *lr* is *relative index* $= X_{t,\ 0}/X_{t-1} \cdot 100$; EMP_t^{SI} – employment rate in Slovenia; EMP_t^{tour} – employment rate in the tourism industry in Slovenia; $TOUR_t^d$ – domestic tourist arrivals; $TOUR_t^f$ – foreign tourist arrivals; CPI_t – consumer price index.
Source: Authors' calculations based on Eurostat (2021) and SORS (Statistical Office of the Republic of Slovenia) (2021).

The Granger Causality test is applied to the analysed time series variables. We specify a vector autoregressive (VAR) model of related time series variables to test the causality between the variables. As part of this process, *CPI* is introduced as an *ex* proxy variable proposed by Gričar and Bojnec (2018). Therefore, we can write a data vector for Slovenia (SI):

$$\underset{N}{\overset{\sim I(1)}{}}[CPI_t]_{ex}\left[EMP_t^{SI}\ \ EMP_t^{tour}\ \ TOUR_t^d\ \ TOUR_t^f\right]\ \underset{SI}{}^{T\left(\sum_{i=1}^{j=0} x_{t-k}\right)_{t\to\infty}}, \tag{2}$$

The abbreviations of the variables are: N is the number of observations, $\sim I(1)$ are the theoretical assumption variables that are integrated at most of the first order; $\sum_{i=1}^{j=0} x_{t-k}$ represents time series in a stochastic process, where j is starting breakpoint and i is the analysed term of value h $(h = i - j)$, and T represents 'time-dependent approach', where $t = 1, \ldots T$, and SI indicates for Slovenia.

3.2. Unit root test

The unit root test results of the empirical studies may vary substantially depending on various factors. These may include the sample period, the number of variables included in the model and the statistical techniques used. It is known from the literature that some time series variables might have a unit root in the levels.

One of the assumptions based on the Granger Causality test in the analysis is the stationarity of a VAR(k) time series representation. To mitigate or eliminate non-stationarity problems, it is possible to use several methodological approaches. A unit root test, for example, is a formal method used for testing the stationarity in time series data. Alternatively, it is possible to apply what is known as the Augmented Dickey-Fuller (ADF) test (Table 3). With help from Tau (τ) statistics, the ADF test can determine the validity of the null hypothesis (Trošt & Bojnec, 2015) that a unit root is present in a time series sample. The alternative hypothesis is stationarity. Table 3 reveals that all studied variables integrated the first order at borderline 10% of the significance level.

Table 3. Augmented Dickey-Fuller (ADF) unit root test for VAR(2).

Variable	τ	Variable	Akaike information criterion	τ
Level		Differenced		
EMP_t^{SI}	0.57 (0.17)	$\Delta lnEMP_t^{SI}$	$[F(12,\ 209) = 27.02]$	-3.62^{**} (0.03)
EMP_t^{tour}	0.93 (0.21)	$lnEMP_{t-1}^{tour}$	$[F(11,\ 212) = 9.79]$	-1.40^{*} (0.15)
$TOUR_t^d$	2.13 (0.99)	$lnTOUR_{t-1}^d$	$[F(13,\ 208) = 149,50]$	-4.12^{***} (0.00)
$TOUR_t^f$	2.24 (0.99)	$lnTOUR_{t-1}^f$	$[F(14,\ 206) = 196,78]$	-3.66^{***} (0.02)
CPI_t	1.68 (0.98)	$lnCPI_{t-1}$	$[F(14,\ 206) = 7,08]$	-2.80^{***} (0.00)

Note: **, *** 5% and 1% significance levels, respectively, Δ – variable contains a linear deterministic trend, F test in [squared brackets], p-values in (brackets) for the most significant result (constant, trend or none of them), $t-1$ – one time accumulated shock, and τ – tau test.
Source: Authors' calculations based on Eurostat (2021) and SORS (Statistical Office of the Republic of Slovenia) (2021).

3.3. Cointegration test

The two-step procedure, formed by Engle and Granger (1987), assumes only one cointegrating relationship among time series variables. The general procedure proposed by Johansen (1988) has the advantage of testing all the possible cointegrating relationships with three hypotheses, which can be tested. Engle and Granger (1987) and Granger (1969) noted that if two-time series variables are cointegrated, at least one directional Granger-causation exists. The existence of a stable and long-running (cointegrating) relationship between a number of EMP_t^{SI} persons, number of EMP_t^{tour}, number of $TOUR_t^d$ and $TOUR_t^f$ implies that two variables are causally related in at least one direction. The Granger causality tests were conducted to answer the question regarding the direction of causation.

3.4. Granger causality test

The causality tests are applied to identify whether a one-time series set causes another time series set or whether the time series are mutually determined. The most widely used causality test is the Granger causality test. The Granger (1969) causality test is applied to study whether one variable precedes another or is concurrent. The Granger causality question is whether $x_{t,\ n}$ causes y_t to see to what past extent values of the first variable can explain the current value of the second variable. The null hypotheses H_{A0}, H_{B0}, and H_{C0}, respectively, are constructed so that the time series $X_{t,\ n}$ does not cause the Granger causality Y_t, where n is a number of time series included in the analyses, and vice versa, the alternate hypotheses H_{A1}, H_{B1}, and H_{C1}, respectively, that studied variables cause the Granger causality.

The Granger causality test can be written in the equation as follows, where y_{1t} represents ΔEMP_{t-1}^{tour} :

$$y_{1,\,t+h|\Omega_t} = y_{1,\,t+h|\Omega_t \setminus \{y_{2,s}|s\le t\}},\quad h = 1, 2, \ldots \tag{3}$$

The time series with t variables indicate essential information in the Ω area with designated space $y_{1,\,t+h|\Omega_t}$, where $h = i - j$, $t \to \infty$. We can assume that y_{2t} represents Granger non-causality for y_{1t}. Non-causality is assumed when equation (3) results are satisfied with the same conditions of h. In our example, y_{2t} shows the observation of

ΔEMP^{tour}_{t-1}. Although the choice of time lags is a matter of judgment, the investigation usually starts with a large number of time lags and with the same number of time lags for both time series. The number of time lags becomes smaller by omitting those not relevant lags (Gričar & Bojnec, 2018) and adding CPI^{i}_{t-2} as an *ex* variable.

The reported F-statistics are the Wald statistics for the joint hypothesis:

$$\beta_1 = \beta_2 = \ldots = \beta_l = 0, \tag{4}$$

for each equation. The null hypotheses H_{A0}, H_{B0}, and H_{C0}, respectively, are that variable x does not Granger-cause time series y in the first regression. Secondly, it suggests that y does not Granger-cause x in the second and third regressions:

$$y_t = \propto_0 + \propto_1 \cdot y_{t-1} + \ldots + \alpha_1 \cdot y_{t-1} + \beta_1 \cdot x_{t-1} + \ldots + \beta_l \cdot x_{-l} + \epsilon_t, \tag{5}$$

$$x_t = \propto_0 + \propto_1 \cdot x_{t-1} + \ldots + \alpha_1 \cdot x_{t-1} + \beta_1 \cdot y_{t-1} + \ldots + \beta_l \cdot y_{-l} + u_t. \tag{6}$$

We illustrate Granger causalities using a data vector to test the tourism industry led-employment, driven by tourist arrivals in Slovenia.

4. Results

4.1. Graphical inspection of the variables

We have made a visual inspection of the dependent and explanatory variables (Figures 1 and 2). The visual inspection yields to the decision of whether the time series variable is normally distributed.

From Figure 1, we can observe that employment in tourism industries grow faster than overall employment in Slovenia. Foreign tourism demand could generate this tourism-led employment growth since foreign tourist arrivals are in the highest frequencies.

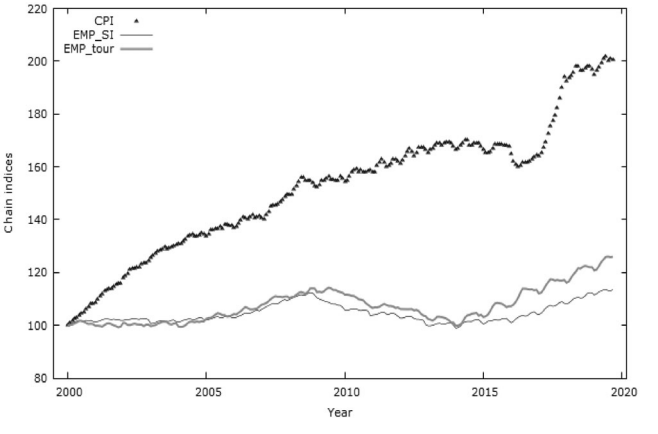

Figure 1. Plotting time-series of inflation and employment.

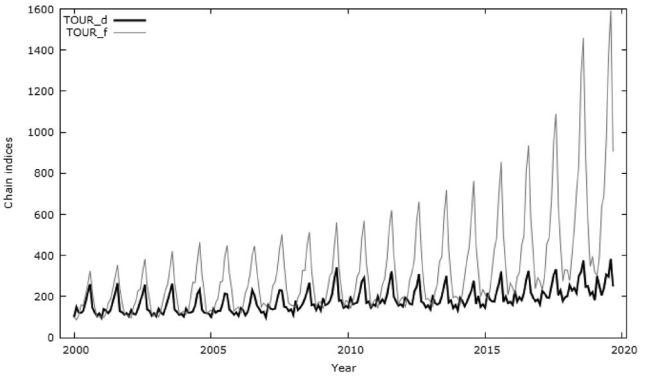

Figure 2. Plotting time-series of tourist arrivals.
Note for Figures 1 and 2: all variables are expressed in chain indices where January 2000 = 100; EMP_SI – employment rate in Slovenia; EMP_{tour} – employment rate in tourism sub-industries in Slovenia; $TOUR_d$ – domestic tourist arrivals; $TOUR_f$ – foreign tourist arrivals
Source: Authors' presentation based on data compiled from SORS (Statistical Office of the Republic of Slovenia) (2021).

Table 4. Granger causality test.

Hypothesis	The direction of causality in logs ρ = 2	F test	Decision
B	$TOUR^{d}_{t-1} \rightarrow EMP^{tour}_{t-1}$	$[F(2,229) = 3,50]^{**}$ (0.03)	Rejection at 5%
	$EMP^{tour}_{t-1} \rightarrow TOUR^{d}_{t-1}$	$[F(2,229) = 17,84]^{**}$ (0.00)	Rejection at 1%
	$TOUR^{f}_{t-1} \rightarrow EMP^{tour}_{t-1}$	$[F(2,229) = 2,9734]^{**}$ (0.05)	Rejection at 5%
	$EMP^{tour}_{t-1} \rightarrow TOUR^{f}_{t-1}$	$[F(2,229) = 13,74]^{***}$ (0.00)	Rejection at 1%
C	$TOUR^{d}_{t-1} \rightarrow \Delta EMP^{SI}_{t}$	[F(2, 229)=4,65]*** (0.01)	Rejection at 1%
	$\Delta EMP^{SI}_{t} \rightarrow TOUR^{d}_{t-1}$	[F(2, 229)=0,29] (0.75)	Cannot be rejected
A	$EMP^{tour}_{t-1} \rightarrow \Delta EMP^{SI}_{t}$	[F(2, 229)=0,05] (0.96)	Cannot be rejected

Note: *, **, *** 10%, 5% and 1% significance levels, respectively; ρ number of lags, and p-values in (brackets).
Source: Authors' calculations based on Eurostat (2021) and SORS (Statistical Office of the Republic of Slovenia) (2021).

4.2. Granger causality test

The Granger (1969) causality test was applied to test the tourism-led employment hypothesis. In addition, we checked whether there was a causal relationship between the first difference variables for EMP_{tour}, EMP^{SI}_{t-2}, $TOUR_f$ and $TOUR^{d}_{t-1}$. Table 4 presents the Granger causality test results.

The VAR analysis provides the most significant applied equation:

$$\Delta EMP^{tour}_{t-1} = .77 + \underset{[.01]}{.003 \cdot TOUR^{d}_{t-1}} - \underset{[.00]}{.001 \cdot TOUR^{f}_{t-1}} + \underset{[.00]}{.58 \cdot EMP^{SI}_{t-2}} - \underset{[.05]}{.004 \cdot CPI^{i}_{t-2}}, \quad (7)$$

where p-values are in parenthesis.

The results show that hypothesis H_{B_0} is rejected, and consequently, the alternate hypothesis H_{B_1} suggests that tourism-led employment is bi-directional or two-way causalities exist between tourism employment and overall tourism arrivals, e.g. domestic and foreign ones. On the other hand, hypothesis ***C*** has only one-way direction causality when overall-led employment causes domestic tourist arrivals. The hypothesis H_{C_1} is partially valid and accepted at a 10% borderline significance level,

e.g. $EMP^{SI}_{t-2} \rightarrow TOUR^{d}_{t-1}$. Finally, we cannot reject hypothesis ***A*** as there is a not-statistically significant relationship between the two variables $\Delta EMP^{tour}_{t-1} \rightarrow EMP^{SI}_{t-2}$ at lag two.

4.3. Discussion and implications

The results of the Granger Causality test on tourism-led employment for Slovenia could be explained in several steps as necessary for tourism science and tourism management, policy and practice.

First, related to hypothesis ***B***, domestic tourist arrivals have bi-directional causality with employment in the tourism industry. This is consistent with previous empirical literature (Alegre et al., 2019).

Second, related to hypothesis ***B***, foreign tourist arrivals have even higher statistical significance levels to confirm bi-directional causality with the employment in the tourism sector. These two two-way (Granger) causal relationship with two lags indicate and confirms previous empirical findings and theoretical exposures regarding the role of the tourism sector with tourist arrivals on the labour demand and job creation in the tourism sector, as well as on the role of employment in tourism for domestic and foreign tourist arrivals.

Third, related to hypothesis *C*, domestic tourist arrivals cause employment in the economy as a whole (Nemec Rudež et al., 2013). *Domestic tourist arrivals can be vital during the low season or turning patterns in domestic tourism markets, such as during a broader economic crisis, hospitality environment uncertainties, or downwards adverse weather conditions*. A management-orientated approach towards forecasting and monitoring tourism demand can provide information basis for risk reductions in tourism destination management, mainly to prevent growth in unemployment (Tohmo, 2018).

Fourthly, related to hypothesis ***C***, at a 10% significance level, the overall-led employment does cause domestic tourist arrivals. This finding is consistent with several previous empirical types of research regarding tourism demand and economic-led tourism growth (Brida et al., 2016). *The results suggest opportunities for hospitality managers to do more for domestic tourists and destination marketing (Hartman* et al.*, 2020). For comparison, in 2017, Slovenian tourists were third in the neighbouring Croatian tourist market of arrivals with 1.3 million (Gulić, 2018), similar to domestic Slovenian tourist arrivals (SORS (Statistical Office of the Republic of Slovenia), 2021).*

Fifth, related to hypothesis ***A***, employment in the hospitality industry does not cause employment in the economy as a whole. This causality effect can be explained by the relatively low percentage of the hospitality industry in total employment in the economy and the economic perspective of employment in the hospitality industry with general seasonal nature in the labour market.

Finally, domestic and foreign tourist arrivals represent a vital research field concerning the labour market challenges in the hospitality industry, especially in the context of Alps-Adriatic countries, a key source of labour for the tourism and hospitality sectors of many Western tourist destinations (Gebbels et al., 2020; Tohmo, 2018). This is indicated by the results of non-causality between the tourism labour market and the Slovenian labour market as a whole.

This study adopts a quantitative method of data collection and analysis to explore whether the tourism industry causes employment and vice versa. Findings are essential for policymakers regarding hospitality and the labour market and employment. The key results show that:

1. Higher employment in tourism in Slovenia is generated by higher demand in tourism, e.g., by domestic and foreign tourist arrivals and vice versa (Table 4, Hypothesis *B*);
2. Domestic tourist arrivals substantially raise overall employment in Slovenia (Table 4, Hypothesis *C*).

Therefore, it can be essential to invest in the domestic tourism labour market with benefits for employees such as prolonged holidays, higher wages, and life-long learning.

Granger Causality test confirms these long-run benefits, while two bi-directional causes of employment in tourism exist. In addition, the foreign tourism demand could lead to even higher employment in tourism. The Slovenian tourism labour market offers unprecedented opportunities for different groups of unemployed people and contributes to lowering the unemployment rate among different structures of unemployed people. Furthermore, expanding employment opportunities in the Slovenian hospitality labour market can facilitate lower dependence on social benefits (Južnik Rotar, 2019).

Being a vibrant and dynamic tourism industry is attractive for young people starting their professional careers. In contrast, policymakers should carefully approach tourism employment planning in the aforementioned segment. According to Eurostat (2021), the Thomas cook collapse and other unprecedented challenges, tourism industry jobs are less stable (Papatheodorou & Pappas, 2017), which might also be seen as a potential trap for deepening the traditional segmentation of the Slovenian labour market and further duality. Additionally, the debate over the effectiveness of hospitality policy should be promoted, and the culture of evaluation recognised to provide effective spending of public funds (Južnik Rotar, 2021).

To effectively address the development opportunities and challenges of the Slovenian tourism labour market, policymakers have to enhance formal education and training. This can do by forming the legal basis for improving working conditions in tourism industries, including public-private partnerships, and providing infrastructure for life-long learning. Considering the Strategy for Sustainable Growth of Slovenian Tourism for the period 2017-2021 (MEDT, 2017) it can be assessed that the Slovenian tourism labour market faces challenges and opportunities. Slovenia has achieved and exceeded planned tourist visits in the mentioned period before the Covid-19 crisis. In 2019, tourist arrivals in Slovenia amounted to 6.23 million (SORS, 2021).

5. Conclusion

This article contributes to both research and discussion regarding tourism-led employment. The Slovenian monthly secondary data obtained from SORS (Statistical

Office of the Republic of Slovenia) (2021) for the 20 years indicate several significant changes in the Slovenian economy of relevance for the Alps-Adriatic region.

The hospitality sector provides various specified tourist services, requiring employment in the sector. The Granger causality test confirms tourism-led employment growth in the Slovenian economy. Unlike theoretical expectations, the results of our study vehemently reject any causal relation between overall employment to domestic tourist arrivals. To sum up, the study results are:

1. $TOUR^{d,\ f}_{t-1} \leftrightarrow EMP^{tour}_{t-1}$;
2. $TOUR^{d}_{t-1} \rightarrow \Delta EMP^{SI}_{t}$.

The findings for the Slovenian tourism labour market provide an emergency call to introduce a new national strategy on the demand side of domestic tourism in the strategic period from 2022 to 2028. Through chambers, policymakers could implement a non-obligatory treaty that provides essential measurements to maintain balanced domestic demands for employees and tourists. Hitherto, the strategy in the hospitality industry should balance between a desirable marketing position and an employment policy.

5.1. Practical Implications

The study suggests that opportunity in the Slovenian hospitality industry lies in a more progressive management policy for domestic tourists. In 2019, foreign tourists represented more than three-quarters of all tourist arrivals. Between 2000 and 2019, foreign tourist arrivals have increased three times faster than domestic ones. During the same period, employment in the hospitality industry was growing faster than overall employment in the Slovenian economy.

Research results are highly relevant and exciting to the hospitality industry. The main result of the research confirms that sub-sectors in the hospitality industry should put more interest in domestic tourists and travellers, which was not the case in the past. For example, Slovenians made around 1.5 million tourist arrivals in Croatia each year. On the other hand, foreign tourist arrivals in Slovenia counted 4.7 million in 2019 (SORS (Statistical Office of the Republic of Slovenia), 2021). This differential in tourist arrivals is considered a challenge for the domestic hospitality industry and tourism managers to spread marketing activities to different clusters of domestic tourists.

5.2. Further Research

Amongst issues for further research, this can be related to public intervention in tourism labour markets concerning hospitality labour market mismatch and tourism challenges. Analysis of the effectiveness of hospitality labour market policy and effective spending of public funds are missing. The analysis of active employment policy targeting tourism activities can be relevant for science, policy and practice regarding questions on youth employment in the hospitality industry and whether the

hospitality industry needs or deserves talents. The relationship between tourism and employment was analysed for a single country in the Alps-Adriatic region. A comparative analysis of more countries in the region can be of greater relevance for science, policy and practice on labour demand in tourism and its possible spillover effects on overall economic employment and sectorial labour productivity. Amongst econometric methods, promoting a culture of empirical evaluation and using modern treatment effect evaluation approaches to estimating causal effects can be seen as an orientation for future research.

Among the model specification, more determinants could be included in the research, like the level of wages in the labour market, both overall and lodging. Moreover, it can be skills obtained by the workers in tourism and migration of the workers inside EU and from the third countries, mostly bordering ones to the EU, like Serbia, Montenegro, and Bosnia and Herzegovina. In such a context, more tourist arrivals mean greater demand for tourism products and services which in turn result in greater labour demand. Not only levels of employment increase but also the equilibrium wage to attract workers from other industries. Similarly, labour supply shortages are assumed to lead to an increase in tourism wages. Yet, there is a problem of tourism labour market mismatches resulting from mismatches between employee qualifications and job requirements. The booming tourism sector may be particularly appealing for labour migration due to expected wages and expectations of low unemployment risk. Consequently, greater labour demand in the tourism sector may be met by labour migration from regions with lower wages and therefore not putting pressure on wages to rise. Additionally, labour migration does not only change labour supply quantitatively but also qualitatively (Walmsley et al., 2022). Deficient skilled domestic tourism employees may face the adverse effects of labour migration. Such a situation of a vicious circle of low wages and low skills in the tourism labour market calls for more sustainable policy decisions.

Disclosure statement

No potential conflict of interest was reported by the authors.

ORCID

Štefan Bojnec http://orcid.org/0000-0002-1270-6372

References

Ahlert, G. (2008). Estimating the economic impact of an increase in inbound tourism on the German economy using TSA results. *Journal of Travel Research*, *47*(2), 225–234. https://doi.org/10.1177/0047287508321197

Alegre, J., Pou, L., & Sard, M. (2019). High unemployment and tourism participation. *Current Issues in Tourism*, *22*(10), 1138–1149. https://doi.org/10.1080/13683500.2018.1464550

Aratuo, D., Etienne, X., Gebremedhin, T., & Fryson, D. (2019). Revisiting the tourism-economic growth nexus: Evidence from the United States. *International Journal of Contemporary Hospitality Management*, *31*(9), 3779–3798. https://doi.org/10.1108/IJCHM-08-2018-0627

Assaf, A., & Cvelbar, L. K. (2011). Privatisation, market competition, international attractiveness, management tenure and hotel performance: Evidence from Slovenia. *International Journal of Hospitality Management*, *30*(2), 391–397. https://doi.org/10.1016/j.ijhm.2010.03.012

Badulescu, D., Simut, R., Mester, I., Dzitac, S., Sehleanu, M., Bac, D. P., & Badulescu, A. (2021). Do economic growth and environment quality contribute to tourism development in EU countries? A panel data analysis. *Technological and Economic Development of Economy*, *27*(6), 1509–1538. https://doi.org/10.3846/tede.2021.15781

Baggio, R., & Sainaghi, R. (2016). Mapping time-series into networks as a tool to assess the complex dynamics of tourism systems. *Tourism Management*, *54*(1), 23–33. https://doi.org/10.1016/j.tourman.2015.10.008

Baum, T. (2018). Sustainable human resource management as a driver in tourism policy and planning: A serious sin of omission? *Journal of Sustainable Tourism*, *26*(6), 873–889. https://doi.org/10.1080/09669582.2017.1423318

Baum, T., Kralj, A., Robinson, R. N. S., & Solnet, D. J. (2016). Tourism workforce research: A review, taxonomy and agenda. *Annals of Tourism Research*, *60*(9), 1–22. https://doi.org/10.1016/j.annals.2016.04.003

Brandt, D. (2018). Wage determinants in the Swedish tourism sector. *Scandinavian Journal of Hospitality and Tourism*, *18*(1), 18–38. https://doi.org/10.1080/15022250.2016.1206832

Brida, J. G., Cortes-Jimenez, I., & Pulina, M. (2016). Has the tourism-led growth hypothesis been validated? A literature review. *Current Issues in Tourism*, *19*(5), 394–430. https://doi.org/10.1080/13683500.2013.868414

Brown, T. L., & Connelly, N. A. (1986). Tourism and employment in Adirondack Park. *Annals of Tourism Research*, *13*(3), 481–489. https://doi.org/10.1016/0160-7383(86)90032-0

Campos-Soria, J. A., Garcia-Pozo, A., & Sanchez-Ollero, J. L. (2015). Gender wage inequality and labour mobility in the hospitality sector. *International Journal of Hospitality Management*, *49*(8), 73–82. https://doi.org/10.1016/j.ijhm.2015.05.009

Carvalho, I., Costa, C., Lykke, N., & Torres, A. (2014). An analysis of gendered employment in the Portuguese tourism sector. *Journal of Human Resources in Hospitality & Tourism*, *13*(4), 405–429. https://doi.org/10.1080/15332845.2014.888509

Castillo, V., Figal Garone, L., Maffioli, A., & Salazar, L. (2015). *Tourism policy, a big push to employment: Evidence from a Multiple Synthetic Control Approach*. IDB Working Paper Series No. IDB-WP-572. Inter-American Development Bank.

Che Ahmat, N., Arendt, S., & Russell, D. (2019). Examining work factors after Malaysia's minimum wage implementation. *International Journal of Contemporary Hospitality Management*, *31*(12), 4462–4481. https://doi.org/10.1108/IJCHM-10-2018-0827

Cheng, J., Gao, X., Saliba, C., & Dördüncü, H. (2021). Examine the nexus between covid-19 and tourism: Evidence from Beijing. *Economic Research-Ekonomska Istraživanja*, 1–21. https://doi.org/10.1080/1331677X.2021.1942119

Chhetri, A., Chhetri, P., Arrowsmith, C., & Corcoran, J. (2017). Modelling tourism and hospitality employment clusters: A spatial econometric approach. *Tourism Geographies*, *19*(3), 398–424. https://doi.org/10.1080/14616688.2016.1253765

Cvecic, I., & Sokolic, D. (2018). Impact of public expenditure in labour market policies and other selected factors on youth unemployment. *Economic Research-Ekonomska Istraživanja*, *31*(1), 2060–2080. https://doi.org/10.1080/1331677X.2018.1480970

Dogru, T., & Bulut, U. (2018). Is tourism an engine for economic recovery? Theory and empirical evidence. *Tourism Management*, *67*(1), 425–434. https://doi.org/10.1016/j.tourman.2017.06.014

Elkan, W. (1975). Relation between tourism and employment in Kenya and Tanzania. *The Journal of Development Studies*, *11*(2), 123–130. https://doi.org/10.1080/00220387508421529

Engle, R., & Granger, C. (1987). Cointegration and error correction: Representation, estimation and testing. *Econometrica*, *55*(2), 251–281. https://doi.org/10.2307/1913236

Eurostat. (2021). *Statistics explained. Tourism industries – employment*. http://ec.europa.eu/eurostat/statistics-explained/index.php/Tourism_industries_-_employment

Fang, B., Ye, Q., & Law, R. (2016). Effect of sharing economy on tourism industry employment. *Annals of Tourism Research*, *57*, 264–267. https://doi.org/10.1016/j.annals.2015.11.018
Farver, J. A. M. (1984). Tourism and employment in the Gambia. *Annals of Tourism Research*, *11*(2), 249–265. https://doi.org/10.1016/0160-7383(84)90073-2
Ferrari, G., Mondéjar Jiménez, J., & Secondi, L. (2022). The role of tourism in China's economic system and growth. A social accounting matrix (SAM)-based analysis. *Economic Research-Ekonomska Istraživanja*, *35*(1), 252–272. https://doi.org/10.1080/1331677X.2021.1890178
Filimonau, V., & Mika, M. (2019). Return labour migration: An exploratory study of Polish migrant workers from the UK hospitality industry. *Current Issues in Tourism*, *22*(3), 357–378. https://doi.org/10.1080/13683500.2017.1280778
Gebbels, M., Pantelidis, I., & Goss-Turner, S. (2020). Conceptualising patterns of career commitment: The leaving process in hospitality. *International Journal of Contemporary Hospitality Management*, *32*(1), 126–147. https://doi.org/10.1108/IJCHM-04-2019-0338
Granger, C. (1969). Investigating causal relations by econometric models and cross-spectral methods. *Econometrica*, *37*(3), 424–438. https://doi.org/10.2307/1912791
Gričar, S., Baldigara, T., & Šugar, V. (2021). Sustainable determinants that affect tourist arrival forecasting. *Sustainability*, *13*(17), 9659. https://doi.org/10.3390/su13179659
Gričar, S., & Bojnec, Š. (2018). Tourism price causalities: Case of an Adriatic country. *International Journal of Tourism Research*, *20*(1), 82–87. https://doi.org/10.1002/jtr.2163
Gričar, S., Šugar, V., & Baldigara, T. (2022). Some considerations about tourist arrivals and the COVID-19 pandemic – evidence from Slovenia and Croatia. *Economic Research-Ekonomska Istraživanja*, 1–19. https://doi.org/10.1080/1331677X.2022.2053781
Gulić, S. (2018). *Tourism in numbers 2017*. Ministry of Tourism of the Republic of Croatia.
Haller, A. P., Butnaru, G. I., Tacu Hârșan, G. D., & Ștefănică, M. (2021). The relationship between tourism and economic growth in the EU-28. Is there a tendency towards convergence? *Economic Research-Ekonomska Istraživanja*, *34*(1), 1121–1145. https://doi.org/10.1080/1331677X.2020.1819852
Hartman, S., Wielenga, B., & Heslinga, J. (2020). The future of tourism destination management: Building productive coalitions of actor networks for complex destination development. *Journal of Tourism Futures*, *6*(3), 213–218. https://doi.org/10.1108/JTF-11-2019-0123
Johansen, S. (1988). Statistical analysis of cointegrating vectors. *Journal of Economic Dynamics and Control*, *12*(2–3), 231–254. https://doi.org/10.1016/0165-1889(88)90041-3
Juselius, K. (2011). Time to reject the privileging of economic theory over empirical evidence? A reply to Lawson. *Cambridge Journal of Economics*, *35*(2), 423–436. https://doi.org/10.1093/cje/beq024
Juselius, K. (2017). Using a theory-consistent CVAR scenario to test an exchange rate model based on imperfect knowledge. *Econometrics*, *5*(3), 30. https://doi.org/10.3390/econometrics5030030
Južnik Rotar, L. (2019). What are the treatment effects of a work-first participation programme on young unemployed people in the Netherlands? *Panoeconomicus*, *66*(2), 203–217. https://doi.org/10.2298/PAN160714028J
Južnik Rotar, L. (2021). Evaluation of the effectiveness of employment programme on young unemployed people. *Engineering Economics*, *32*(1), 60–69. https://doi.org/10.5755/j01.ee.32.1.23276
Koens, A., & Wood, R. C. (2017). An analysis of international employment levels in hospitality occupations using secondary statistics. *International Journal of Tourism Research*, *19*(5), 496–504. https://doi.org/10.1002/jtr.2122
Ladkin, A. (2011). Exploring tourism labor. *Annals of Tourism Research*, *38*(3), 1135–1155. https://doi.org/10.1016/j.annals.2011.03.010
Li, X. P., Joppe, M., & Meis, S. M. (2017). Human resource management impacts on labour productivity in tourism. *Tourism Economics*, *23*(5), 1028–1041. https://doi.org/10.1177/1354816616662761

Line, N. D., & Hanks, L. (2019). The social servicecape: Understanding the effects in the full-service hotel industry. *International Journal of Contemporary Hospitality Management*, *31*(2), 753–770. https://doi.org/10.1108/IJCHM-11-2017-0722

MEDT. (2017). *Strategy for sustainable growth of Slovenian tourism for the period 2017-2021*. Ministry of Economic Developoment and Technology.

Nemec Rudež, H., Sedmak, G., & Bojnec, Š. (2013). Benefit segmentation of seaside destination in the phase of market repositioning: The case of Portorož. *International Journal of Tourism Research*, *15*(2), 138–151. https://doi.org/10.1002/jtr.881

O'Donnell, E. T. (1970). How to measure employment that results from tourism. *Travel Research Bulletin*, *9*(1), 7–59. https://doi.org/10.1177/004728757000900102

OECD (Organisation for Economic Cooperation and Development). (2020). *OECD Tourism Trends and Policies 2020*. https://www.oecd-ilibrary.org/sites/93f6c6fb-en/index.html?itemId=/content/component/93f6c6fb-en

Papatheodorou, A., & Pappas, N. (2017). Economic recession, job vulnerability, and tourism decision making: A qualitative comparative analysis. *Journal of Travel Research*, *56*(5), 663–677. https://doi.org/10.1177/0047287516651334

Perles-Ribes, J. F., Belén Ramón-Rodríguez, A., Sevilla-Jiménez, M., & Moreno-Izquierdo, L. (2016). Unemployment effects of economic crises on hotel and residential tourism destinations: The case of Spain. *Tourism Management*, *54*, 356–368. https://doi.org/10.1016/j.tourman.2015.12.002

Prasad, N., & Kulshrestha, M. (2015). Employment generation in tourism industry: An input–output analysis. *The Indian Journal of Labour Economics*, *58*(4), 563–575. https://doi.org/10.1007/s41027-016-0035-2

Qin, M., Su, C. W., & Zhang, S. P. (2020). Tourism and Unemployment in Hong Kong: Is There Any Interaction? *Asian Economics Letters*, *1*(1), 1–5. https://doi.org/10.46557/001c.17222

Radjenovic, M. (2019). Perception of worker quality in tourism in selected countries of the former Yugoslavia. *Transformations in Business & Economics*, *18*(3), 128–136.

Robinson, R. N. S., Martins, A., Solnet, D., & Baum, T. (2019). Sustaining precarity: Critically examining tourism and employment. *Journal of Sustainable Tourism*, *27*(7), 1008–1025. https://doi.org/10.1080/09669582.2018.1538230

Robinson, R. N. S., Ritchie, B. W., Kralj, A., Solnet, D. J., Baum, T., & Ford, R. C. (2014). An Asia-Pacific core-periphery futures paradox: Divergent worker and tourist mobilities. *Journal of Travel Research*, *53*(6), 805–818. https://doi.org/10.1177/0047287513513164

Rowley, G., & Purcell, K. (2001). As cooks go, she went': Is labour churn inevitable? *International Journal of Hospitality Management*, *20*(2), 163–185. https://doi.org/10.1016/S0278-4319(00)00050-5

Šergo, Z. (2019). Inter-generational employment spillovers from tourism across the EU. *Ekonomska Misao i praksa*, *28*(1), 97–125.

Shakeela, A., Ruhanen, L., & Breakey, N. (2011). The role of employment in the sustainable development paradigm—The local tourism labor market in small island developing states. *Journal of Human Resources in Hospitality & Tourism*, *10*(4), 331–353. https://doi.org/10.1080/15332845.2011.588493

Solnet, D., Nickson, D., Robinson, R., Kralj, A., & Baum, T. (2014). Discourse about workforce development in tourism—An analysis of public policy, planning, and implementation in Australia and Scotland: Hot Air or making a difference? *Tourism Analysis*, *19*(5), 609–623. https://doi.org/10.3727/108354214X14116690097936

SORS (Statistical Office of the Republic of Slovenia) (2021). *SI-STAT database*. https://pxweb.stat.si/SiStat

The Economist. (2021, November 8). International travel will get easier, but restrictions will remain. *The Economist*.

Thulemark, M., Lundmark, M., & Heldt-Cassel, S. (2014). Tourism employment and creative in-migrants. *Scandinavian Journal of Hospitality and Tourism*, *14*(4), 403–421. https://doi.org/10.1080/15022250.2014.968000

Tohmo, T. (2018). The economic impact of tourism in Central Finland: A regional input–output study. *Tourism Review*, *73*(4), 521–547. https://doi.org/10.1108/TR-04-2017-0080

Tosun, C., Çalişkan, C., Şahin, S. Z., & Dedeoğlu, B. B. (2021). A critical perspective on tourism employment. *Current Issues in Tourism*, 1–21. https://doi.org/10.1080/13683500.2021.2021155

Townsend, A. (1992). New directions in the growth of tourism employment – propositions of the 1980s. *Environment and Planning A: Economy and Space*, *24*(6), 821–831. https://doi.org/10.1068/a240821

Trošt, M., & Bojnec, Š. (2015). Causality between public wage bill, exports and economic growth in Slovenia. *Economic Research-Ekonomska Istraživanja*, *28*(1), 119–131. https://doi.org/10.1080/1331677X.2015.1028241

Tugcu, C. T. (2014). Tourism and economic growth nexus revisited: A panel causality analysis for the case of the Mediterranean Region. *Tourism Management*, *42*(1), 207–212. https://doi.org/10.1016/j.tourman.2013.12.007

UNWTO (United Nations World Tourism Organization), and ILO (International Labour Organization). (2014). *Measuring employment in the tourism industries – Guide with best practices*. UNWTO.

Walmsley, A., Koens, K., & Milano, C. (2022). Overtourism and employment outcomes for the tourism worker: Impacts to labour markets. *Tourism Review*, *77*(1), 1–15. https://doi.org/10.1108/TR-07-2020-0343

Williams, A. M., & Shaw, G. (1988). Tourism – candyfloss industry or job generator. *Town Planning Review*, *59*(1), 81–103. https://doi.org/10.3828/tpr.59.1.2r72w70p330v61v0

Winchenbach, A., Hanna, P., & Miller, G. (2019). Rethinking decent work: The value of dignity in tourism employment. *Journal of Sustainable Tourism*, *27*(7), 1026–1043. https://doi.org/10.1080/09669582.2019.1566346

Winters, P., Corral, L., & Moreda Mora, A. (2013). Assessing the role of tourism in poverty alleviation: A research agenda. *Development Policy Review*, *31*(2), 177–202. https://doi.org/10.1111/dpr.12002

Witt, S. F., Song, H., & Anhill, S. W. (2004). Forecasting tourism-generated employment: The case of Denmark. *Tourism Economics*, *10*(2), 167–176. https://doi.org/10.5367/000000004323142407

Ying Mei, X. (2019). Gaps in tourism education and workforce needs: Attracting and educating the right people. *Current Issues in Tourism*, *22*(12), 1400–1404. https://doi.org/10.1080/13683500.2017.1402870