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# EFFECTS OF RENEWAL INVESTMENTS IN IMMOVABLE CULTURAL HERITAGE ON SLOVENIAN PUBLIC FINANCES: CONVERGENCE WITH SELECTED EU COUNTRIES

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In our paper we provide a measure of the optimal state incentive needed for the purpose of regular investment in maintaining immovable cultural heritage. Slovenia annually needs 32.7 million euros of investment for the maintenance of its immovable cultural heritage, which is feasible with 16.4 million euros of state subsidies. Comparing the mechanisms of selected EU countries, we show convergence occurrences using an indirect approach. Investments in cultural heritage represent an increase in one of the components of final demand with a positive impact on the economy. This was assessed with Leontief's production function (effect via reproduction chain). Investments in the maintenance of immovable cultural heritage also have a positive impact on tourism revenue. According to the results of the input-output analysis, regular maintenance annually results in 60.9 million euros' value added with 22.4 million euros higher general government revenue. The net fiscal effect of incentives for these investments is positive for 36.5% of public funds spent.

Keywords: EU, cultural heritage, investment, fiscal policy, convergence



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## INTRODUCTION

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Preservation of cultural heritage, its promotion and sustainable use represent an irreplaceable contribution to human development and quality of life, while maintaining our cultural identity. According to the Slovenian Protection of Cultural Heritage Act, cultural heritage is defined as a property inherited from the past, defined by the community as a reflection and expression of its values, identities, religious and other beliefs, knowledge and traditions. Heritage includes aspects of the environment that result from the interaction between people and space over time. Heritage is divided into tangible and intangible heritage. Material heritage consists of movable and immovable heritage. In our paper we analyse the immovable part of material cultural heritage in the context of financing integrated conservation as a set of measures that ensure the continued existence and enrichment of heritage, its maintenance, restoration, renovation, use and revival (Republic of Slovenia, Protection of Cultural Heritage Act). Public funds for the preservation of cultural heritage in Slovenia are drastically decreasing and there are virtually no effective fiscal incentives for investing in it. Cultural heritage has thus become a major financial burden for the owners and has put them in an unequal position with other property owners. Therefore, we analyse the system of financing the maintenance of cultural monuments and the tax incentives for owners of immovable cultural heritage in Slovenia and EU member states in order to propose appropriate and effective measures for improving the preservation of cultural heritage. We also find that in the field of cultural heritage there are many legislative obligations, both in Slovenia and internationally. The protection of cultural heritage is a constitutional category. The Constitution of the Republic of Slovenia obliges the state to preserve natural wealth and cultural heritage and create opportunities for a harmonious civilisation and cultural development of Slovenia. It also stipulates that the state and local communities shall ensure the preservation of the natural and cultural heritage. The obligation to protect cultural heritage is defined and regulated by international legal acts: The UNESCO Convention on the Protection of the World Cultural and Natural Heritage, the Council of Europe Conventions (Convention on the Protection of European Architectural Heritage, European Convention for the Protection of the Archaeological Heritage, and European Landscape Convention). The Law on Cultural Heritage Protection is also very important in the field of cultural heritage in Slovenia.

The aim of this paper is to explain the role of the state in promoting investment in the maintenance and restoration of immovable cultural heritage in Slovenia. We focused on good

practices in countries with a long tradition and the best practices in the maintenance of immovable cultural heritage such as France, Croatia, Italy, Germany, the Netherlands, Spain and the United Kingdom. The analysis of the net financial impact of tax reliefs or state subsidies intending to promote the maintenance of immovable cultural heritage is made following best practices of analysed state measures and incentives. In the end, as a synthesis, a proposal for Slovenian tax incentives for investments in the maintenance of immovable cultural heritage is given. We focused on the latest analyses that deal with encouraging the funding of cultural heritage, using legislative obligations, both in Slovenia and internationally. In our paper we take into account the Slovenian institutional framework, in which the tradeoff between protection and valuation of cultural heritage is resolved by cogent decisions or permission of the Institute for the Protection of Cultural Heritage of Slovenia. There is no need for special certification efforts in this field in Slovenia.

To show a positive impact of investments in the field of cultural heritage, we first tested the direct and indirect impact of investments in the maintenance of immovable cultural heritage on Slovenian construction, the entire economy and the net fiscal effect of state incentives for these investments. Afterwards, in the same manner of positivism, we tested the indirect impact of properly maintained immovable cultural heritage on Slovene tourism and on the whole economy as well as public finance inflows. The direct and indirect impact of the maintenance of immovable cultural heritage on the Slovenian economy and the net fiscal effect of government expenditure for this purpose, taking into account the impact of increased construction activity and growth of tourism, was tested to confirm the positive impact of investments.

The second section presents a literature review, which is followed by the Convergence co-movements in the financing of preservation. The fourth section provides the methodology, data and model used. Section five presents the results and discussion and the last section ends the paper with conclusions and recommendations.

## LITERATURE REVIEW

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Cultural heritage gives rise to a flow of services that may be consumed as private and public goods entering final consumption immediately and may contribute to the production of future goods and services, including new cultural capital (Throsby, 1999). Cultural heritage is directly addressed in several EU policies, including culture, environment, research and innovation, education, regional policy and customs cooperation. Policies for maintenance, restoration, accessibility and ex-

exploitation of cultural heritage are primarily national or local responsibilities (European Commission, 2014). Thus, we can observe the lack of assets for maintenance and restoration on a national and local level. Here lies the reason and the need for external financial support as well as support from the fiscal side.

It seems that in most EU countries the fiscal assets for financing maintenance and restoration of cultural heritage are not sufficient. We therefore provided some data regarding the alternatives and mixed financial constructions in the next chapter of our paper.

Although there has been a relatively small number of research papers published in this area, we provide the reader with some important research papers. One of the pioneering works in the analysed field was made by Klamer, Petrova, and Mignosa (2005), describing the various sources of financing culture in Europe for the period 2000–2005. The analysis covers direct public financial support (subsidies, awards, and grants, as well as lottery funds provided by central and lower levels of governments); indirect public financial support (tax expenditures); private financial support from non-profit organisations, business organisations and individual donations. Pickard (2009) identified opportunities for the mobilisation of financial resources for conservation, restoration, rehabilitation and management of the architectural heritage in Europe and North America. He showed a lot of different positive approaches in funding architectural heritage from all over the world.

A comprehensive study was done by Čopič et al. (2011). The study identified trends in encouraging private investment in the cultural sector in EU member states. The study elaborated on empirical data gathered through questionnaires, case studies of five countries (Italy, the Netherlands, Poland, Slovenia, and the United Kingdom) and desk research. It provided an overview of mechanisms and measures used to encourage private investment, including tax framework (i.e. encouraging the consumption of culture and business and philanthropic investment), financial and banking schemes and intermediary mechanisms. A comparison was provided between private investment in culture in the United States and in Europe. Kömhoff, Heinsius, and van Dorssen (2013) were surveying methodologies for the study of corporate giving (including art and cultural) in Europe. Their study, based on the 2011 Green Paper, "Unlocking the Potential of the Cultural and Creative Industries" (by the European Commission), tried to unlock this untapped potential (from cultural and creative industries) and build a bridge between the cultural sector and the business world. Wijesuriya et al. (2013) demonstrated

what heritage is; they explained the importance of managing heritage, connected heritage conservation and sustainable development, described approaches to heritage conservation and management, and, defined heritage management systems and how to assess and improve them. Srakar and Vecco (2016) presented the situation in the field of private cultural investment at the EU level and in all EU-28 countries. They presented the legislation and practice of private investment in culture (related to historical facts) in seven EU countries (Denmark, France, Germany, the United Kingdom, Croatia, Italy, and the Netherlands) and on this basis they prepared a comprehensive list of recommendations for possible changes in the field of private investment in culture in Slovenia. Galland, Lisitzin, Oudaille-Diethardt, and Young (2016) showed the importance of Outstanding Universal Value, and they illustrated the creativity used by managers, local and regional government, heritage agencies and communities to ensure that sites can sustain their value and continue to comply with the World Heritage Convention. They presented challenges and opportunities that properties face once they have been registered as (World) Heritage, and covered various aspects of the day-to-day management for such properties. They also discussed some of the many resources and partnership opportunities, both public and private, which are available to support (World) Heritage properties.

Bold and Pickard (2018) presented an overview of the Council of Europe's work in the field of cultural heritage over the last 40 years and analysed the processes and results of major heritage projects (focusing on three main perspectives – monuments and sites, historic towns and territories) conducted within the Technical Cooperation and Consultancy Programme (TCCP) of the Council of Europe, in association with the European Commission since 2003. They demonstrated the role of heritage in revitalisation and sustainable development. They also pointed out issues such as demographic changes, migrations, socio-economic crises and climate change in connection to cultural heritage, which promote and protect cultural diversity, democratic governance and democratic innovation. Culture Action Europe in the publication *The Value and the Values of Culture* (2018) collected relevant evidence substantiating the impact of culture across a range of EU policy fields and demonstrated the EU added value of culture and the subsequent need to support the cultural ecosystem properly. It showed that a direct expenditure of 19.4 million euros in cultural heritage, defined by restoration expenses and enhancement with European funds allocated to the central Italian government and to the five Italian convergence regions, generated a greater output (domestic production) of 50.5 mil-

lion euros with an increase of overall employment of 884 work units. Furthermore, the funding of culture (and cultural heritage) has been shown to positively impact regional development.

## **CONVERGENCE CO-MOVEMENTS IN THE FINANCING OF PRESERVATION**

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Nearly all countries in the EU have reduced (or some even have zero) rates of value added tax (VAT) for financing the preservation of cultural heritage. In connection with cultural heritage there are examples of reduced VAT (following certain conditions) for work on residential buildings (Belgium, France, Italy, the Netherlands and Ireland). In Spain, all work on historic buildings is taxed with a lower rate of VAT. In the UK, VAT is exempted from services related to restoration work on registered cultural monuments and historical buildings, and most of the goods and materials associated with these structures. In the Netherlands, the Amsterdam Restoration Company is exempt from VAT for its renovation work in old historic buildings. The sponsorship is a bilateral business relationship that brings the sponsor a benefit by advertising support for a cultural asset or a cultural institution that, with received sponsorship funds, acts in the field of culture and carries out agreed obligations to the sponsor. The Czech Republic, Latvia, Lithuania, Slovakia, Slovenia and Sweden treat sponsorships as normal costs, while other countries are aware of specific tax incentives for sponsorships (sponsorships in the Netherlands are, up to a certain amount, free from capital gains tax; in Malta, sponsorships can be deductible from the tax base; there are special facilities in Bulgaria for investing in the restoration of cultural heritage and monuments; in Greece, cultural sponsorship funds can be completely deducted from the taxable base of an individual or company, once a year).

Public-private partnerships are common in large infrastructure projects and as such are not recognised as the most appropriate form of investment in culture. However, there are some incentives for public-private partnerships in culture in some EU countries (e.g. in Austria), especially in the field of museums; in Belgium, for a special culture support programme; in Ireland, a scheme for expanding work in the field of music; there is a programme for the revitalisation of cultural heritage in Portugal, under which private construction companies devote at least 1% concession to restoration, conservation and the reconstruction of cultural heritage objects for grants given by the Ministry of Culture; in the UK public-private partnerships are used as a tax deduction.

Over the past decades, in the countries of Eastern Europe, a mechanism for support through income tax donations

has been developed (so-called "percentage legislation") where taxpayers can devote a certain proportion (e.g. 2% in Lithuania, Croatia and Slovakia, 1% in Hungary, Poland and Romania, while in Slovenia and Italy only 0.5%) of their income tax (in Croatia also tax on profit, e.g. devoting 2% from the tax basis) to determined non-profit and non-governmental organisations. The main public financer of the restoration of cultural heritage in Croatia is the Ministry of Culture with their Programme of financing public needs.

The donations are most developed in Anglo-Saxon countries, especially in the US, but are also known in the EU countries (in the UK, since 2000, a simplified tax regime allows individuals to reduce tax liabilities from donations to organisations supporting culture, including cultural heritage; in Belgium, tax payers can deduct donations to support work on certain cultural heritage; in Ireland, tax payers are entitled to a reduction of tax obligations for donations to certain non-profit organisations, including those involved in the preservation of cultural heritage; in the Netherlands, tax payers are entitled to tax exemptions for donations to non-profit organisations for the preservation of cultural heritage; inheritance tax up to 60%).

Analysing several options of financial support to cultural heritage, we also find some other additional forms, such as private investment in culture, matching funds or matching grants, a special form of support private investment in culture ("venture" philanthropy), and new mechanisms on the digital scene also affecting new possibilities of private funding of culture. Using an indirect approach to show the convergence occurrences, we find a number of different mechanisms in the EU promoting the financing of culture, and in this context preserving cultural heritage.

## **METHODOLOGY, DATA AND MODEL USED**

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In the analysis of the effects of economic activity related to the maintenance of immovable cultural heritage, we assessed the impact of construction and tourism activities directly and indirectly (through suppliers of reproductive material and relevant services and through the further reproduction demand of these suppliers). We repeated the same procedure to evaluate the direct and indirect effects of the impact of increased employee benefits, depreciation, profit and general government revenue on the growth of personal, investment and government spending, and its impact on revenue growth, added value (and its components), on employment and on capital use, on development activity, on imports and on fiscal inflows. The results are calculated in 2017 prices and show the effect of this activity on Slovenian production, added val-

ue, employee benefits, depreciation, operating surplus, employment, fixed assets, investments for research and development (R&D), imports of goods and services and general government revenue. The analysis was carried out on the data of 63 sector input-output matrices of the Slovenian economy in 2015 (Statistical Office of the Republic of Slovenia: SURS). The direct and indirect impact of the given scale and structure of spending on these economic variables was estimated by:

$$M = (I-Ad)^{-1} * Y, \quad (1)$$

$$H = (\text{diag } GDP/X) * (I-Ad)^{-1} * Y, \quad (2)$$

$$G = Au * (I-Ad)^{-1} * Y, \quad (3)$$

$$Z = (\text{diag } F/X) * (I-Ad)^{-1} * Y. \quad (4)$$

$M$  is the global impact of increased demand – revenue ( $Y$ ) on production by industry and the sum shows the impact on the overall economy;  $Ad$  is the matrix of technical coefficients – the column of domestic inputs divided by the production in a given sector ( $X$ );  $I$  is a unit matrix;  $(I-Ad)^{-1}$  is a matrix multiplier.

$H$  is the global impact of increased demand – revenue ( $Y$ ) on value added or its components (employee benefits, depreciation and business surplus), where  $GDP/X$  is a diagonalised value added matrix or its components ( $GDP$ ) divided by the sectoral production ( $X$ ).

$G$  is the global impact of increased demand – revenue ( $Y$ ) on imports.  $Au$  is the import component of the technological matrix, obtained by dividing imports into industries with their production.

$Z$  is the global impact of increased demand – revenue ( $Y$ ) on the production factor, where  $F$  is the number of employees, the value of fixed assets, or investments in R&D,  $\text{diag } F/X$  is a diagonalised matrix of direct factors of the production factor  $F$  in the sectoral production ( $X$ ).

Our assessment of the direct and indirect impact of growth in demand for construction and tourism services on production (revenue), added value and its components, employment of labour and capital, development activity and imports in the Slovenian economy is based on the model of the Leontief production function and assumes constant yields of production factors, the elasticity of substitution equals 0 and the homogeneity of production within the sectors. The results of the input-output analysis can be considered as initial tendencies with the indicated direction. The general government effects are calculated from the estimated impact on added value and 36.72% of the average share of general government revenue (taxes and contributions) in Slovenia's GDP in 2015.



Input output analysis (Leontiev's inverse) is generally useful for evaluating the direct and indirect effects of a given volume and structure of final consumption on the national economy. To predict long-term effects, we would have to use input-output matrix for many years, design dynamic multipliers and also evaluate the factors that influence these dynamics. In this sense, our analysis is an initial step, which, however, provides sufficiently high-quality information on the specific effects of a sound fiscal policy in the field of the preservation of immovable cultural heritage.

## RESULTS AND DISCUSSION

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The Ministry of Culture (Černe, 2018a) collected the data on the public ranking of the reported projects for state co-financing of investment in immovable cultural heritage preservation from 1998 to 2018. Based on these estimates, we assume that 30.3 million euros is the amount to be annually paid for the population, the economy or civil society, who wish to obtain the regular and proper maintenance of the immovable cultural heritage in their possession. At the same time, it was assumed that tax deductions (or public subsidy) would cover 46% of this amount (the same percentage as in the period from 1989 to 2015). In this case, investments would be made, and the immovable cultural heritage would be adequately maintained. The Ministry of Culture (Černe, 2018b) also assessed the need to maintain state-owned immovable cultural heritage and annually invest 2.4 million euros. So the stimulation of the private sector (with civil society organisations), tax incentives (or state subsidies) and public funds for the maintenance of immovable cultural heritage annually amounts up to 16.4 million euros, and total required renovation investments in the objects of immovable cultural heritage in Slovenia in the amount of 32.7 million euros.

We analysed the direct and indirect impact of investments in the maintenance of immovable cultural heritage on Slovenian construction, the entire economy and the net fiscal effect of state incentives for these investments. Table 1 shows that an investment in the maintenance of immovable cultural heritage in the amount of 32.7 million euros, lead at the national level to 65.6 million euros of production (revenue), 24.5 million euros of added value (13.3 million euros in employee benefits, 3.3 million euros of depreciation and amortisation and 6.8 million euros of operating surplus). At the annual level, this investment will directly and indirectly provide 700 employees with their jobs, and fixed assets of 42.4 million euros will be used. The sectors that will carry out the analysed activity are not intensively developmental. R&D activity will only spend 100 thousand euros. When carrying out maintenance work on immovable cultural heritage, the Slovenian

economy will import goods worth 8.2 million euros. At the macroeconomic level, the analysed investments will allow for increased production and business surplus by 0.1%, while elsewhere, the effect will be around 0.05%.

As a result of the added value created, with the analysed renewal investments in the immovable cultural heritage, 9 million euros of general government revenue will be generated, so there is going to be a negative net fiscal effect of only 7.4 million euros or 55% less than the actual state payment for subsidies or the same amount of tax relief for this purpose.

☞ TABLE 1  
Direct and indirect  
impact on the  
Slovenian economy –  
maintenance work in  
the construction sector  
– 32.7 million euros

|                                             | In mill. EUR | % on the macro-<br>economic scale |
|---------------------------------------------|--------------|-----------------------------------|
| 1 Production                                | 65.6         | 0.09                              |
| 2 Added value                               | 24.5         | 0.06                              |
| 3 Funds for employees                       | 13.3         | 0.07                              |
| 4 Consumption of fixed capital              | 3.3          | 0.04                              |
| 5 Business surplus                          | 6.8          | 0.10                              |
| 6 Working force<br>(in 1000 active workers) | 0.7          | 0.07                              |
| 7 Fixed assets                              | 42.4         | 0.03                              |
| 8 Resources for R&D                         | 0.1          | 0.01                              |
| 9 Imports of goods and services             | 8.2          | 0.04                              |
| 10 General government revenue               | 9.0          | 0.05                              |

Next we analysed the direct and indirect impact of properly maintained immovable cultural heritage on Slovene tourism and on the whole economy as well as public finance inflows. In our analysis, we were interested in the increase of tourist activity in the towns and cities, including Ljubljana in the period 2008 to 2017, and we took into account the growth of tourism revenue from its increase in the rest of Slovenia (coastal, mountainous, health resorts and other places) as a result of properly maintained immovable cultural heritage. If immovable cultural heritage were neglected, this growth of tourism would not exist. Or if, over the years, the neglect of maintenance of the immovable cultural heritage continues, the income of tourism will begin to shrink accordingly.

☞ TABLE 2  
Tourist arrivals and  
tourist overnight stays

| 2017 versus 2008   |              | Slovenia          | Towns includ-<br>ing Ljubljana | Other             |
|--------------------|--------------|-------------------|--------------------------------|-------------------|
| Tourist arrivals   | % Difference | 60.5<br>1.864.367 | 97.4<br>641.673                | 50.4<br>1.222.694 |
| Tourist overnights | % Difference | 35.2<br>3.277.524 | 79.4<br>1.066.116              | 27.7<br>2.211.408 |

Table 2 shows that the number of tourist arrivals and tourist overnight stays in Ljubljana and other Slovenian towns

TABLE 3  
Tourism in 2008 and  
in 2017

(97% and 79% respectively) increased significantly more than in the rest of the Slovenian tourism sector between 2008 and 2017 (50% and 28% respectively). The average share of tourist arrivals and overnight stays in the towns, including Ljubljana, was 0.175 in relation to the total Slovenian result in 2008 and 0.225 in 2017 (Table 3).

| Share of towns including Ljubljana versus Slovenia | Estimated by tourist arrivals | Estimated by tourist overnights | Average |
|----------------------------------------------------|-------------------------------|---------------------------------|---------|
| 2008                                               | 0.21                          | 0.14                            | 0.175   |
| 2017                                               | 0.26                          | 0.19                            | 0.225   |

Table 4 shows the revenue and the added value of tourist activities in towns (including Ljubljana) in relation to the total income of Slovenian tourism in 2017. In this year, the total income of Slovenian tourism (at current prices) amounted to 1952.1 million euros, and the estimated revenue of tourist activities in Ljubljana and other towns amounted to 439.2 million euros. The assumption is that the above average growth of tourist arrivals and overnight stays in cities in Slovenia between 2008 and 2017 is the consequence of the growth of tourism related to the expected experience of tourists visiting Slovenian cities and especially the medieval city centres. From 2008 to 2017, the number of tourist arrivals to Slovenia in total increased by 60.1% and in Slovenian cities by 97.4%, while in the same period the number of tourist overnight stays in Slovenia increased by 35.2% and in cities by 79.4% (Source: Statistical Office of the Republic of Slovenia).

TABLE 4  
Revenue and added  
value of tourism in  
2017

|                           | In million EUR | Revenues | Value added |
|---------------------------|----------------|----------|-------------|
| Sum                       |                | 1952.1   | 915.8       |
| Towns including Ljubljana | 22.5%          | 439.2    | 206.1       |
| Other                     | 77.5%          | 1512.9   | 709.7       |

In Table 5 we see that the income of the tourism sector, at constant prices (2010), amounted to 1601.0 million euros in 2008 and 1755.1 million euros in 2017. Regarding the share of towns, the total number of tourist arrivals and their overnight stays in Slovenia, and the turnover of tourism, the tourist activity in towns, measured at constant prices (2010), amounted to 280.2 million euros in 2008 and 394.9 million euros in 2017.

The faster growth of tourism activities in towns (including Ljubljana) from 2008 to 2017 enabled an additional income of Slovene tourism at an annual level of 15.6 million euros (which represents the annual opportunity cost of eventual neglect of the renovation investments in immovable cultural heritage in Slovenia).

➤ TABLE 5  
Revenue from tourism  
at constant prices  
(2010) – real

|                                      | 2008   | 2017   |
|--------------------------------------|--------|--------|
| Revenue (in million EUR)             | 1601.0 | 1755.1 |
| Towns with Ljubljana (17.5% → 22.5%) | 280.2  | 394.9  |
| Others (82.5% → 77.5%)               | 1320.8 | 1360.2 |

Table 6 shows the multiplicative impact of tourism activities, 15.6 million euros of direct revenue for this sector, on the Slovenian economy. At the national level, the increase in tourist activity in cities in relation to the growth of other sectors of the economy generates 24.1 million euros in revenue, 11.9 million euros of added value (7.0 million euros of employees' benefits, 2.7 million euros of depreciation and 1.7 million euros of business surplus) each year. Increased activity per year allows 500 more employees and engagement of 45.5 million euros of fixed assets. The increased activity of tourism, due to its successful marketing in towns and cities, will require 3.7 million euros of additional imported goods and services. At the macroeconomic level, the analysed increase in tourism activity would represent a 0.05% increase in employment, while the impact on revenue and added value would be only 0.03%. Increased activity of tourism (by 15.6 million euros) would have an impact on additional government revenues to the amount of 4.4 million euros.

➤ TABLE 6  
Direct and indirect  
impact on the Slovenian economy – annual growth in tourism revenue in towns (with Ljubljana) above the growth of the rest of tourism revenue – 15.6 million euros

|                                             | In million EUR | % on the macro-economic scale |
|---------------------------------------------|----------------|-------------------------------|
| 1 Production                                | 24.1           | 0.03                          |
| 2 Added value                               | 11.9           | 0.03                          |
| 3 Funds for employees                       | 7.0            | 0.04                          |
| 4 Consumption of fixed capital              | 2.7            | 0.03                          |
| 5 Operating surplus, net                    | 1.7            | 0.03                          |
| 6 Working force<br>(in 1000 active workers) | 0.5            | 0.05                          |
| 7 Fixed assets                              | 45.5           | 0.03                          |
| 8 Imports of goods and services             | 3.7            | 0.02                          |
| 9 General government revenue                | 4.4            | 0.02                          |

We began to test the direct and indirect impact of maintenance of immovable cultural heritage on the Slovenian economy and the net fiscal effect of government expenditure for this purpose, taking into account the impact of increased construction activity and growth of tourism and examining the impact of increased construction and tourism activity down the reproduction chain. Let us look at the overall result of the impact that the Slovenian national economy has on public finances, the increase in construction activity and tourism, related to the maintenance of immovable cultural heritage. In

Table 7, we see that investment leads to the maintenance of immovable cultural heritage in the amount of 32.7 million euros and the annual increase in tourism revenue by 15.6 million euros at the national level to almost 90 million euros of production (revenue), up to 36 million euros added value (20 million euros' employee benefits, 6 million euros' depreciation and 8.5 million euros of operating surplus). At the annual level, the analysed activity will directly and indirectly enable the employment of 1,100 workers and the commitment of 88 million euros of fixed assets. Only about 100 thousand euros will be invested in research and development. For the analysed activity of construction and tourism, the import of goods and services in the amount of 12 million euros will be required directly and indirectly. The influence of the maintenance of immovable cultural heritage and the associated tourist activity on revenue, employee benefits, business surplus and employment exceeds 0.1% of the total value of the given macroeconomic variable at the annual level (prices 2017).

☞ TABLE 7  
Direct and indirect  
impact on the Slovenian economy – annual growth in construction revenues for maintenance\*

|                                             | In million EUR | % on the macro-economic scale |
|---------------------------------------------|----------------|-------------------------------|
| 1 Production                                | 89.7           | 0.12                          |
| 2 Added value                               | 36.3           | 0.09                          |
| 3 Funds for employees                       | 20.2           | 0.11                          |
| 4 Consumption of fixed capital              | 6.0            | 0.07                          |
| 5 Operating surplus, net                    | 8.5            | 0.13                          |
| 6 Working force<br>(in 1000 active workers) | 1.1            | 0.12                          |
| 7 Fixed assets                              | 87.9           | 0.07                          |
| 8 Resources for R&D                         | 0.1            | 0.02                          |
| 9 Imports of goods and services             | 12.0           | 0.06                          |
| 10 General government revenue               | 13.3           | 0.08                          |

\* Direct and indirect impact on the Slovenian economy – annual growth in construction revenues for maintenance of immovable cultural heritage in the amount of 32.7 million euros, and an annual increase in tourism revenue in towns (with Ljubljana) above the growth of the rest of tourism revenue – 15.6 million euros.

The activity derived from investments in the restoration of immovable cultural heritage is neither development-intensive nor capital-intensive, nor import-intensive. Due to its nature (linked to the necessary reconstruction of buildings and other objects of immovable cultural heritage), it cannot increase much more than we have analysed in this chapter, and therefore cannot serve economic policy as a major measure in preventing recession. Finally, in the last line of Table 7, we see that as a result of the added value generated by analysing renewal investments in immovable cultural heritage

(not only due to construction activity, but also due to tourism activities), 13.3 million euros of general government revenues will be generated. Considering that the state will use the aforementioned 16.4 million euros for subsidies (tax incentives) to investors and own investments for this purpose, the negative net fiscal effect is only 3.1 million euros or 81% less than the actual state subsidies or equal amount of tax breaks.

The impact of the increased construction and tourist activities down the reproduction chain, together with the impact of the increase in employee benefits on personal consumption, depreciation and business surplus on investments, and indirect and direct tax inflows to the consumption of the general government are analysed in these last pages of our paper. The growth in these types of consumption is also leading to growth in supplier income and its impact can be analysed by the Leontief production function.

By analysing personal consumption, we take into account that employees' salaries are taxed with personal income tax and contributions for employment, for maternity care, for health insurance, and for pension and disability insurance. Personal consumption is influenced by the net disposable income of employees. At the same time, revenues from the contribution for pension and disability insurance are transferred directly to personal consumption. This part (net income of the population) is reduced by the level of saving. The difference is the effect of the increased income of employee on personal consumption and through this multiplying effect on the economy. Regarding the investments, remunerations of companies from depreciation are fully invested. At the same time, according to our assumption, the net operating surplus is reduced by the corporation tax rate and fully invested. We also assume that the savings of the population are placed in the financial system and further into investments. By its definition, the general government revenue is the difference between the estimated impact on added value and the sum of employee benefits, depreciation and operating surplus. These are taxes on production and imports or indirect taxes. The impact of direct taxes is assessed with the share of personal income tax and contributions for employment, maternity care and health insurance in the remuneration of employees for the entire year 2015. The share of corporation tax in business surplus, 2015 is added to this. These are total assets collected through direct taxes and are assumed to be used to cover public spending. Regarding direct imports, we take into account that part of the personal, investment and government consumption is covered by imports. The shares of imports in total consumption are obtained from the input-output matrix data for 2015.

☞ TABLE 8  
Multiplicative impact  
of investments in the  
maintenance of  
immovable cultural  
heritage\*

In our analysis, the impact of increased employee benefits, depreciation, business surplus and taxes is added to the impact of increased construction and tourism activity and together we finally estimate the multiplicative impact of investments in the maintenance of immovable cultural heritage on the Slovenian economy.

|                                             | In million EUR | % on the macro-economic scale |
|---------------------------------------------|----------------|-------------------------------|
| 1 Production                                | 136.7          | 0.19                          |
| 2 Added value                               | 60.9           | 0.16                          |
| 3 Funds for employees                       | 33.6           | 0.18                          |
| 4 Consumption of fixed capital              | 11.6           | 0.15                          |
| 5 Operating surplus, net                    | 13.1           | 0.20                          |
| 6 Working force<br>(in 1000 active workers) | 1.8            | 0.19                          |
| 7 Fixed assets                              | 177.8          | 0.14                          |
| 8 Resources for R&D                         | 0.6            | 0.08                          |
| 9 Imports of goods and services             | 25.7           | 0.12                          |
| 10 General government revenue               | 22.4           | 0.13                          |

\* Direct and indirect impact on the Slovenian economy based on annual increase in construction revenues for the maintenance of immovable cultural heritage in the amount of 32.7 million euros, and an annual increase in tourism revenue in cities (with Ljubljana) above the growth of the rest of tourism revenue – 15.6 million euros with the further impact of an increase in employee income, depreciation, operating surplus and indirect taxes.

The results of such an extended analysis are shown in Table 8. In it, we see that the impact increases to 137 million euros in revenue, to 61 million euros added value, to 1,800 new jobs and the use of 178 million euros of fixed assets. Imports of goods and services will increase by almost 26 million euros and general government revenue by 22.4 million euros. Considering that the state spent 16.4 million euros to encourage investments in the maintenance of immovable cultural heritage, the net fiscal effect is positive in the amount of 6 million euros or 37% more than the actual state subsidies or equal amount of tax breaks.

## CONCLUSIONS

Investments in the necessary renovation of the Slovenian immovable cultural heritage (30.3 million euros in the private sector together with civil society organisations and 2.4 million euros in the public sector annually) will have an impact on the growth of tourist activity in places where objects of immovable cultural heritage lie (mainly in the cities). Our paper

shows that the above-average average growth of tourism services has had significant macroeconomic effects and, in this context, a sufficiently large fiscal inflow to encourage the maintenance of the immovable cultural heritage. Consequently, the construction activity necessary for the restoration of the immovable cultural heritage and the increased tourism activity associated with appropriately maintained immovable cultural heritage will increase employment, revenue, added value and, the general government revenue in Slovenia. Additionally, the Republic of Slovenia has a constitutional obligation to maintain this heritage and, when it comes to immovable cultural heritage of a private property, regulate its maintenance against compensation or calls for renewal investments. The question arises as to what is the most optimal form of financing the tasks of the state in this field. On the basis of benchmarking with the most successful EU member states in financing the maintenance of immovable cultural heritage, we can conclude that tax incentives are the most appropriate to encourage these investments.

Slovenia had a balanced budget in 2017, in 2018 it had 0.8% of GDP surplus in the consolidated public financing balance (European System of Accounts – ESA 2010) and a similar result was reached in 2019. Tax incentives that will enable the regular and sufficient maintenance of immovable cultural heritage in Slovenia should be regulated. A condition for tax relief must be the certificate of the Institute for the Protection of Cultural Heritage of Slovenia that it is in fact an investment in the restoration of immovable cultural heritage in accordance with the cultural and security requirements. The introduction of fiscal incentives for the preservation of cultural heritage will empower the owners of cultural heritage, place them in a more equal position with other property owners and enable them to finance the necessary investments in the restoration of cultural heritage facilities. Our analysis was carried out for the present decade and includes only the data available from the Slovenian statistical office. We therefore recommend future research in the way of forming the comparative cultural heritage financing matrix for different groups of EU countries, i.e. old EU member states and eastern EU member states.

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## Učinci ulaganja u obnovu nepokretne kulturne baštine na slovenske javne financije: konvergencija s odabranim zemljama EU-a

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U radu je prikazan izračun optimalnoga državnog poticaja za redovito ulaganje u održavanje zgrada koje pripadaju nepokretnoj kulturnoj baštini. Rezultati pokazuju da za neto fiskalni učinak ove vrste državnih poticaja Sloveniji godišnje treba 32,7 milijuna eura investicija za održavanje nepokretne kulturne baštine, što je ostvarivo sa 16,4 milijuna eura državnih subvencija. Usporedbom mehanizama odabranih država Europske unije, s posrednim pristupom prikazali smo konvergencijska kretanja. Ulaganja u kulturnu baštinu predstavljaju povećanje jedne od komponenti finalne potražnje s pozitivnim utjecajem na gospodarstvo. Procijenili smo ga Leontijevom produkcijskom funkcijom (učinak preko reprodukcijskog lanca). Ulaganja u održavanje nepokretne kulturne baštine pozitivno utječu i na prihode od turizma. U odnosu na input-output analizu, redovito održavanje godišnje rezultira dodatnom vrijednošću od 60,9 milijuna eura uz 22,4 milijuna eura većih prihoda države. Neto fiskalni učinak poticaja za ova ulaganja pozitivan je za 36,5 % utrošenih javnih sredstava.

Ključne riječi: EU, kulturna baština, investicije, fiskalna politika, konvergencija



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