

ISSN2464-0344

# Res novae



*Revija za celovito znanost*  
*Journal for Integrated Science*

*Robert Devetak*

GORIŠKE SLOVENKE V ČASU POPISA PREBIVALSTVA  
LETA 1910

*Andrej Lažeta*

POMEN JOŽEFA KLEKLA ZA PRIKLJUČITEV PREKMURJA  
H KRALJEVINI SHS

*David Petelin*

O PREVPRÁŠEVANJU IZGUBLJENE PRETEKLOSTI: SOCIALISTIČNA  
JUGOSLAVIJA IN JUGONOSTALGIJA

*Petja Mihelič*

SMOTER IN PRAVIČNOST POZITIVNEGA PRAVA

*Domagoj Dodig*

BLENDING PUBLIC-PRIVATE PARTNERSHIPS WITH INNOVATIVE  
FINANCING OPTIONS IN THE IMPLEMENTATION OF CULTURAL HERITAGE  
SECTOR PROJECTS

**Fakulteta za pravo in poslovne vede, Katoliški inštitut**  
**Faculty of Law and Business Studies, Catholic Institute**

LETNIK 4 • 2019 • ŠTEVILKA 2

# *Res novae*

Res novae: revija za celovito znanost

Izdajatelj in založnik:

Fakulteta za pravo in poslovne vede, Katoliški inštitut

Naslov uredništva:

Res novae, Krekov trg 1, 1000 Ljubljana

Odgovorni urednik:

Andrej Naglič

Glavni urednik:

Simon Malmenvall

Spletni naslov:

<http://www.katoliski-institut.si/sl/raziskovanje/res-novae>

E-pošta:

[simon.malmenvall@kat-inst.si](mailto:simon.malmenvall@kat-inst.si)

Uredniški odbor:

Philip Booth (Institute of Economic Affairs, London, Velika Britanija),

Andres Fink (Pontificia Universidad Católica Argentina, Facultad

de Ciencias Sociales, Buenos Aires, Argentina), José Ignacio Murillo

(Universidad de Navarra, Instituto Cultura y Sociedad, Pamplona,

Španija), Aniko Noemi Turi (Katoliški inštitut, Fakulteta za pravo in

poslovne vede, Ljubljana, Slovenija), Mitja Steinbacher (Katoliški

inštitut, Fakulteta za pravo in poslovne vede, Ljubljana, Slovenija),

Anton Stres (Katoliški inštitut, Fakulteta za pravo in poslovne vede,

Ljubljana, Slovenija), Zoran Vaupot (Katoliški inštitut, Fakulteta za

pravo in poslovne vede, Ljubljana, Slovenija).

Leto izida: 2019

Tisk:

Primitus d. o. o., Ljubljana

Oblikovanje in prelom:

Breda Sturm

Naklada:

200 izvodov

Letna naročnina:

28€ (Slovenija), 40€ (Evropa), 57\$ (ostalo navadno),

66\$ (ostalo prednostno)

ISSN (tiskana verzija): 2464-0344

ISSN (elektronska verzija): 2464-0352

# *Res novae*

*Revija za celovito znanost  
Journal for Integrated Science*



SPIRITUS  
AUTEM  
VIVIFICAT

LETNIK 4 • 2019 • ŠTEVILKA 2

# **Vsebina**

*Robert Devetak*

Goriške Slovenke v času popisa prebivalstva  
leta 1910

**7**

*Andrej Lažeta*

Pomen Jožefa Klekla za priključitev Prekmurja  
h Kraljevini SHS

**39**

*David Petelin*

O prevpraševanju izgubljene preteklosti:  
socialistična Jugoslavija in jugonostalgija

**67**

*Petja Mihelič*

Smoter in pravičnost pozitivnega prava

**93**

*Domagoj Dodig*

Blending Public-Private Partnerships with Innovative  
Financing Options in the Implementation of Cultural  
Heritage Sector Projects

**105**

UDK: 623.687:332.834.8  
1.02 pregledni znanstveni članek

**Domagoj Dodig**

Republic of Croatia, Ministry of Economy,  
Entrepreneurships and Crafts (Zagreb)

## **Blending Public-Private Partnerships with Innovative Financing Options in the Implementation of Cultural Heritage Sector Projects**

**Abstract:** Over the past few decades, many countries are facing with lack of funding sources for revitalization of cultural heritage projects. Due to the raising public sector debt and deficit, decision makers have been looking for alternative solutions with involvement of the private sector in revitalization of cultural heritage sites. These projects have traditionally been procured, financed and provided by the public sector. While the majority of EU funding resources will be realized in a more traditional way through purely grant-funded procurement models, a *New EU Agenda for Culture* for the programming period 2021–2027 has focused on supporting higher private sector involvement in cultural heritage investments for achieving the EU strategy goals. Seeing that the fundamental purpose of investing in cultural heritage is “investing in protecting and valorizing common history and values,” the involvement of the private sector is only possible through public-private partnerships (PPP) models. The main objective of this paper is to assess the effectiveness of blending public-private partnership models with available EU innovative financing options in cultural heritage sector by applying case study simulation on a selected PPP project in the operational

phase. The findings will show the effectiveness of PPP's and the use of blending solutions in cultural investments.

**Key words:** cultural heritage, public procurement, financial instruments, cultural revitalization, public-private partnership

### **Dopolnjevanje javno-zasebnih partnerstev z inovativnimi možnostmi financiranja pri izvajanju projektov na področju kulturne dediščine**

**Izvleček:** V zadnjih desetletjih se številne države spopadajo s pomanjkanjem finančnih virov za projekte, namenjene revitalizaciji kulturne dediščine. Zaradi naraščajočega dolga in deficita v javnem sektorju odločevalci iščejo alternativne rešitve, ki pri revitalizaciji krajev in stavb s kulturno dediščino vključujejo sodelovanje zasebnega sektorja. Tovrstni projekti so tradicionalno razpisani, financirani in izvajani v okviru javnega sektorja. Čeprav bo odobritev večine finančnih virov Evropske unije potekala na bolj tradicionalen način s pomočjo razpisov, se *Nova agenda EU za kulturo* za programsko obdobje 2021–2027 osredotoča na podporo večjega vključevanja zasebnega sektorja v vlaganja na področju kulturne dediščine, da bi tako dosegli cilje evropske strategije. Izhajajoč iz dejstva, da je temeljni namen vlaganj v kulturno dediščino »vlaganje v zaščito in ovrednotenje skupne zgodovine in vrednot«, je vključevanje zasebnega sektorja mogoče zgolj preko modelov javno-zasebnega partnerstva. Glavni cilj tega članka je oceniti učinkovitost dopolnjevanja modelov javno-zasebnega partnerstva z obstoječimi inovativnimi možnostmi financiranja iz sredstev Evropske unije na področju kulturne dediščine. S tem namenom članek prinaša simulacijo študije primera izbranega projekta v okviru javno-zasebnega partnerstva v njegovi operativni fazi. Ugotovitve kažejo na

učinkovitost javno-zasebnih partnerstev in rabe dopolnjujočih se oz. mešanih rešitev pri vlaganjih na področju kulture.

**Ključne besede:** kulturna dediščina, javni razpisi, finančni instrumenti, kulturna revitalizacija, javno-zasebno partnerstvo

## Introduction

Since public sector debt and state budget deficit have raised maximum level of public sector payment capabilities, many decision makers in the public sector have started exploring new delivery models and financing options (Yescombe 2007) for revitalization of cultural heritage sites. These alternative models may involve different public-private partnership (PPP) models in revitalization of cultural heritage projects – that is traditionally provided and procured by the public sector: from traditional construction contracts, BOT (built-operate-transfer) models, BOO (build-own-operate) models, BOOM (build-own-operate-maintenance) models, DBFMO (design-build-finance-maintenance-operate) models, up to privatization models.

According to the European Commission (2018), cultural sector is one of the main pillars within the New EU programming period during 2020–2027. For this reason, the European Commission in 2018 proposed the *New EU Cultural Agenda*, which is mainly focused on three strategic objectives: “social dimensions, economic based creativity in education and innovation and strengthening international cultural relations” with the main purpose to protect and valorize cultural heritage by 2030. Today, about 70 % of cultural sites in the EU needs significant revitalization, depending on the member state, only 2–2.5 % of the stock is renovated each year. (UNESCO 2018) While the majority of EU funding sources will be implemented through

more traditional, purely grant-funded procurement models, the *New EU Agenda for Culture* (EC 2018) for the programming period 2021–2027 has focused on supporting participation of the private capital in cultural investments, heritage revitalization, research and innovation initiatives (etc.) in order to achieve the *EU 2030 strategy goals*. Considering the fact that the fundamental purpose of investing in culture is “investing in protecting and valorizing EU common history and values,” the involvement of the private sector is only possible through applying some of the public-private partnerships models.

The main aim of this research is to assess the effectiveness of using public-private partnership options with available EU innovative financing options within the *New EU Agenda for Culture* on a Croatian case study example. As the maximum effectiveness of every transaction can be achieved by using synergy with public and private sector capacities, the overall objectives of this paper are:

to define the possibility of applying PPP models for the implementation of cultural heritage projects based on a Croatian case study in operational phase;

to examine different innovative financing options for the revitalization of cultural heritage projects;

to present a concept of blending using the Croatian cultural heritage revitalization case study example.

According to the set objectives, the main motive for choosing Croatia as a case study is availability of data regarding revitalization of cultural heritage places through a PPP model and the fact that Croatia is one of the pioneer countries in EU

which developed in detail the methodology for blending EU funds with PPP models. (Rojić Lugarić et al. 2019)

### **Review of past research**

In recent years, more and more researchers have started to explore the area of revitalization of cultural heritage and models that have been developed within such projects. Due to the fact that cultural heritage projects have become one of the EU policy tools for protecting and valorizing common history and values in many EU member states (Psychogiopoulou 2018), many decision makers in the public sector have started to introduce new delivery models for the cultural investments. (Della Spina et al. 2018) According to EIB (2016), PPP is one of the most common options for the implementation of the public sector projects. According to Jelinčić et al. (2018), these contracts typically include obligations during the whole-life-cycle period. Zhao (2016) states that the private sector can identify cultural needs better and deliver reconstruction works at a lower cost than public authorities. According to Macdonald (2011), the key success factor in these transactions is the involvement of the private capital – not only during reconstruction period but during the whole-life-cycle period. Jelinčić et al. (2018) have made a comparative analysis of the development of the PPP markets in cultural heritage sector in selected EU member states. In their conclusion they state that PPP can be seen as a new, alternative way of financing cultural projects which involve significant private sector financing.

In Croatia and Slovenia several researchers have investigated investments in the cultural sector and their impact on the economic growth and development. In 2016 Cifrić investigated

Croatian heritage conservation in the context of the European Union. He found that “policy implications in joining EU should helped Croatia to raise awareness of the importance in national identity and proactive attitude towards heritage.” Hribar and Lozej (2013) have emphasized the cultural elements that contribute to the development of rural areas in Slovenia. In their conclusion they have prescribed that revitalization of cultural heritage sites can significantly influence the sustainable development of rural areas as well as increase the economic potential for the future generations. Matečić (2017) has conducted a comprehensive research in valuation of tangible cultural heritage assets in tourism sector. She stated that investments in cultural heritage should be observed in a wider social and political context, not only in relation to their economic value.

As there is still a significant lack of scientific and professional research in the field discussed, this paper represents an attempt to identify the process of allocation of public private partnership models with innovative financing options for the purpose of implementing cultural heritage sector projects by applying case study simulation.

### **Public private partnership models and innovative financing options**

Investments in cultural heritage projects, such as renovation/ deep renovation of cultural buildings or revitalization of historical places, make an important aspect of the GDP growth. According to the European Commission (2018), increasing effectiveness in providing such projects means “investing in protecting and valorizing common history and values.” A typical public sector project in the revitalization of cultural

heritage can include deep renovation of public buildings, revitalization of historical places and archaeological findings. Its main purpose to provide service in public interest and protect national historical values. (Veco 2010) Many local units in the EU are facing with obstacles in preparing, procuring and implementing these projects. (Cheung et al. 2013) According to Jelinčić et al. (2017), these investments can mitigate financial constraints in the long term and help public sector units to meet their targets in line with the EU strategy goals. An important tool for achieving these targets is a model known as PPP. In these models, public authorities implement cultural heritage projects without taking a loan and bearing significant risks of the investment. Instead, the authorities stipulate the output specifications and transfer the risks to the private sector, which is responsible for the availability of the historical assets or goods.

As the *New EU Agenda for Culture* for the programming period 2021–2027 focuses on supporting higher private sector involvement in cultural investments (rather than traditional procurement), the aim of this paper is more focused on PPP models, where the private sector bears operational risks of the projects. This means that the private sector is responsible for design process, construction/reconstruction process, as well as the operation and maintenance (Grimsey and Lewis 2002) process of heritage revitalization.

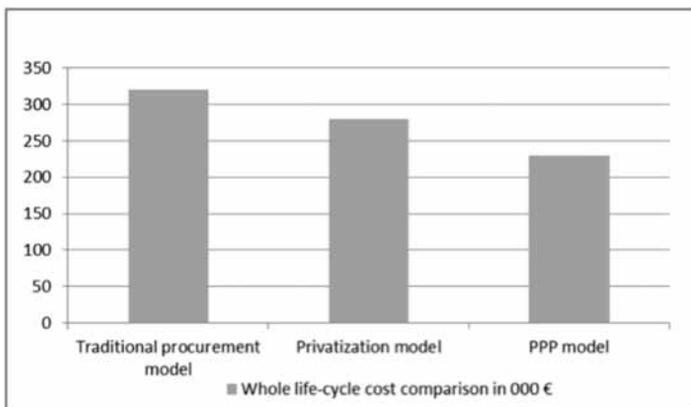
### *Conventional and PPP procurement models*

The conventional procurement model is still widely used for revitalization of cultural heritage places across the EU. In many countries this is the only model applied. The main characteristic of the conventional model is the fact that

the public sector is fully responsible for the revitalization of cultural heritage and its future operation efficiency. All the project phases, from the start of project preparation, through reconstruction, maintenance and operational period, are a responsibility of the public sector. The majority of project risks are borne by the public sector. During the project implementation, the public sector is not only responsible for initial financing of the asset reconstruction, but also for achieving technological optimization and effectiveness throughout the whole-life-cycle period. By applying the conventional model, the private sector has a very small influence, usually during reconstruction period only. It is, therefore, questionable if the public sector has enough knowledge and skills to optimally manage and operate project risks in the long-term period.

Besides the conventional procurement, alternative PPP models are widely used. According to Grimsey and Lewis (2002), the main focus of PPP is on providing cultural services based on clearly defined output specifications during the whole-life-cycle period. In a typical PPP structure, the private sector bears risks related to construction and/or reconstruction and at least one of the following risks – availability risk or demand risk. (Eurostat 2016) The main advantages of using PPPs in cultural heritage projects derive from the comprehensive preparation and implementation of the cultural projects. The main purpose of implementing PPP cultural heritage projects is reflected in the provision of services in public interest, not only in realizing reconstruction works on the heritage places. During implementation, PPP contracts can connect different elements of cultural heritage projects, i.e. link the design and reconstruction with one or all of the finance, operation and maintenance elements. (Jelinčić et al. 2017) The PPPs also have a better scope for transferring risks

compared to the conventional procurement methods. For example, public sector payments are not fixed. Therefore, public authorities only focus on setting output specifications and realizing the expected value for money. (Bing et al. 2005) Unlike the traditional model, the use of PPPs has to be justified by different analytical tools. One of the most common techniques is called “value-for-money analysis (VfM).” VfM presents a comparison tool for analyzing different delivery options before launching the tender. (EPEC 2015) It includes the whole-life-cycle costs comparison of a possible cultural heritage project. Figure 1 shows a typical example of a VfM analysis with three possible procurement options: traditional procurement, PPP model and privatization.



**Figure 1:** This example indicates that the most favorable option is the PPP model. This means that if the public sector wants to implement a certain cultural heritage revitalization project, the maximum VfM in the whole-life-cycle will be achieved by the PPP model, taking into account all costs in a 30-year period of the project life.

### *Innovative financing in procuring cultural heritage projects*

Procuring cultural revitalization projects requires significant funding sources. While the public sector is usually more focused on conventional, budget or purely grant-funded models, there are several other innovative financing options available. All of them can be divided in the two main groups: on-balance sheet financing and off-balance sheet financing.

The first one, the on-balance financing, is connected with conventional procurement and presents a situation where public authority lends financing sources from third parties. It is called “on-balance” because it causes public deficit and debt increase. It is usually in the form of classical debt funding, where commercial banks provide financial sources to the public authority for covering construction costs regarding cultural revitalization projects. Another type of on-balance financing is equity financing, where investors usually provide a financial source in a form of subordinated debt in exchange for a stake in a project or in a form of subsidies, such as national funds, EU funds (etc.). The third type of financing is a link between equity instruments and debt funding instruments – it is called mezzanine financing and is usually provided when the funding gap exists between equity and debt instruments. It allows their holders to convert mezzanine debt into equity or debt.

The second group, off-balance financing, presents an innovative financing option and it is used for financing cultural projects, where some of private sector participation exists. It is called “non-recourse finance,” due to the fact that only collateral for repayment is a future cash flow of investment. It can be in a form of project finance or leasing. Project finance transactions can be in a same form as on-balance sheet mechanisms (equity finance, mezzanine finance and debt

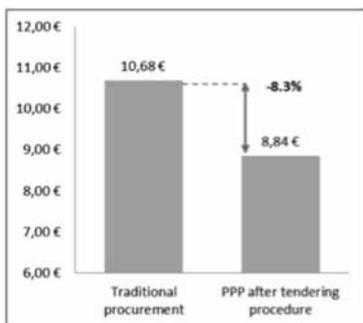
finance), but with different collateral, while the leasing instruments are generally used for financing the equipment (rather than investments in fixed assets).

In conventional procurement, cultural heritage projects are usually financed from classical budget finance and available public sector grants, while possible combinations of grants and other mentioned mechanisms are possible only if there is enough institutional and administrative public sector capacity which understands all advantages and drawbacks of such operations.

### **Croatian case study**

According to the Report from Croatian Ministry of Regional development and EU funds (2017), in the period 2014–2020 Croatia has on disposal more than 238 million € EU sources for implementing revitalization of cultural heritage projects in public sector. The majority of them will be used through the conventional-purely granted model, while only some of the sources will apply to the PPP model. As the one of the goals of this paper is to define the possibility of applying PPP models and to present a possible concept of blending, in the following paragraphs we present a case study simulation based on revitalization of the cultural heritage project. The mentioned case study presents a deep renovation, conservation, restoration and revitalization of Varaždin County palace in Croatia, which is currently running as a PPP project. The main reason for selecting this case study project is historical data availability. In this phase, the analysis was conducted in two steps. In the first step, statistical data from the specific project was collected from the Croatian PPP unit (AIK 2018), while in the second the effectiveness of blending process was assessed.

VfM analysis<sup>1</sup> of the project is presented as a “unique unitary charge” per square meter per month.<sup>2</sup> The price of the public services includes whole-life-cycle costs (WLC) of the contract in the 20-year period – it is shown in Figure 2 below.



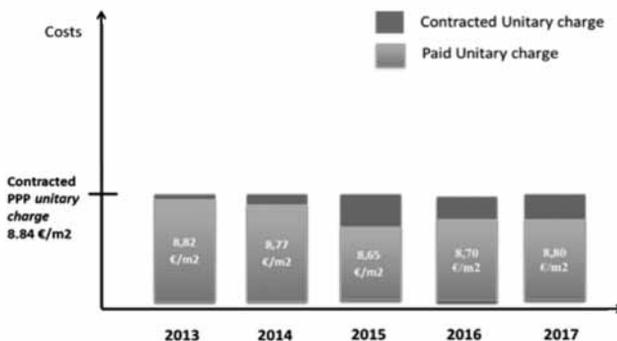
**Figure 2:** VfM analysis shows that the public authority assessed the unitary charges of the project at 10.68 €/m<sup>2</sup> per month and the maximum price of the public service if the project is realized through conventional procurement. The second column (8.84 €/m<sup>2</sup>) shows the value after tendering procedure and a bid offered by the private sector, i.e. the contracted price for providing public service.

Unlike the conventional procurement, where the unitary charges are largely fixed and without a possibility of changing, unitary charges in PPP models are not fixed and depend

- 1 VfM analysis is obligatory according to the Croatian PPP law. In this project it presents the costs of design, finance, building, operation and maintenance of infrastructure within different procurement models (traditional procurement and PPP procurement after tendering procedure). The values are presented in a form of unique monthly unitary charge in Euro (€) per square meter. The values include VAT.
- 2 Unique unitary charge includes the costs of design, finance, construction, operation and maintenance of the asset in the whole life-cycle-period (30 years). The costs are in a form of €/m<sup>2</sup> per month. The data are available in the Register of PPP projects in Croatia.

on the availability of services. That means that the level of public sector payments in the form of unitary charges will be directly correlated with the provision of the public service; any incomplete provision of the service or unavailability of assets will result in payment deduction. (Roguć-Lugarić et.al. 2019) In the case study example presented in Figure 2, it means that the value of 8.84 €/m<sup>2</sup> presents the maximum contracted unitary charge and it will be paid from the public funds to the private partner only if the public service is 100 % available. The payment is directly correlated with the level of service provision. If the level of service is lower, the unitary charges will also be lower. The basic payment structure operates on the following condition: “100 % availability = 100 % payment or 0 % availability = 0 % payment.”

In next part of the analysis, the relevant historical data of the case study was collected for the period 2013–2017. The data was obtained according to the form of unitary charges per month per square meter from the regulatory body responsible for PPPs in Croatia. In the context of the relevant historical data, the following Figure 3 shows the ratio of contracted and paid unitary charges for the period 2013–2017.



**Figure 3:** The difference between contracted and paid unitary charges in mentioned years is at around 2–3 %. The payment

structure of the PPP model, based on the “pay only the services that had been delivered” model, means that the public sector in revitalizing this cultural heritage object saved more than 10 % of taxpayers’ money during 2013–2017.

### *Concept of blending in cultural heritage projects*

Applying PPP models with using various EU grants and financial instruments is called “blending.” (EIB 2016) The main concept of blending presents a simultaneous use of grants, such as non-repayable resources, and financial instruments as repayable resources in the same PPP or conventional procurement contract.

According to EIB (2016), there are several possible solutions for using grants and financial instruments in procuring revitalization of cultural heritage projects. In the first option, the “EU grant is payed as a contribution to the capital costs in a construction-only contract.” This option includes private sector involvement only during the construction phase and it represents the simplest structure from the EU grant perspective. The second option involves using PPP models and grants. It includes “EU grant as a contribution to the capital costs based on a single contract covering construction and operation expenditures.” During the implementation of this model, the private sector is usually responsible for the conceptual design, construction/reconstruction phase and operational phase, while financing provision is not within its domain. Payments from the public sector during the operational phase usually include operating and maintenance costs only, while the costs of capital are covered by the grant and are not included in the contract. The third option includes “parallel funding and financing of capital expenditure based on two separate con-

tracts." This option has two components: the first is funded by the private sector (usually as a PPP contract), whereas the second is funded by national and EU funds for infrastructure components. According to Rogić-Lugarić et al. (2019), unlike the conventional model, where the main focus is on capital costs and funding, the aim of the blending process is to achieve not only financial effectiveness for the entire duration of the contract, but also transfer operational risk to the private sector or another contract party which is most capable of managing it.

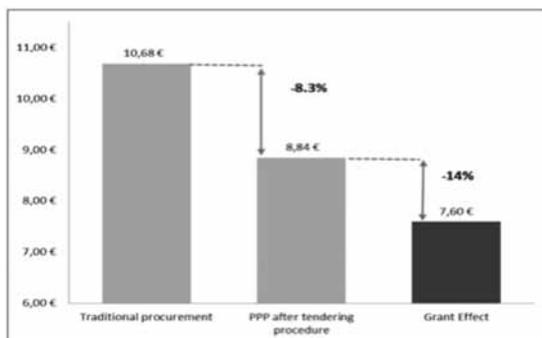
As the objective of this paper is to present the concept of blending in cultural heritage sector, the following paragraphs will offer a simulation of using different innovative financing options (grants and financial instruments) within the PPP model as shown by a Croatian case study example.

### *Effectiveness of blending in cultural heritage sector*

The following research phase concerning the blending in cultural heritage sector is done in three steps. In the first step, the test of simultaneous use of PPPs and grants will be employed, while the test of simultaneous use of PPPs, grants and financial instruments will be employed in the second step. The third step presents the simulation of the possible cost of public service during 2013–2017, according to Figure 3, if in the same period the blending process was available for the public sector. As one of the most important parts of the whole-life-cycle costs in cultural heritage projects is CAPEX,<sup>3</sup> its reduction is directly correlated with the level of unitary charge payment. Therefore, in our case, if we take into consideration that the minimum grant for cultural heritage project is around 30 % of

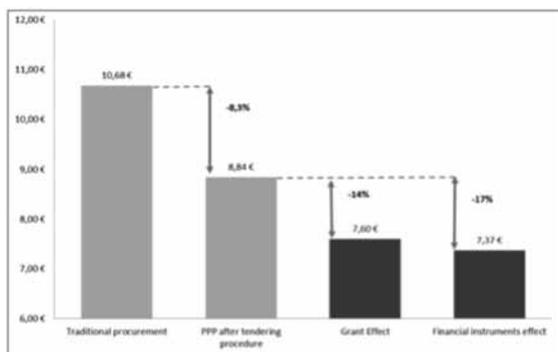
3 CAPEX (capital expenditure) presents a cost of construction and/or reconstruction and/or necessary construction works for revitalization cultural heritage assets.

eligible capital costs (AIK 2017), the effect on our case study will result in additional reduction of unitary charge of the 14 %, as shown in Figure 4.



**Figure 4:** VfM analysis with grant effect

It follows that the first step of blending will increase VfM by an additional 14 % and the new contracted unitary charge will amount to 7.60 €/m<sup>2</sup>. Instead of using grants as a source of funding, Kaczmarek et al. (2018) suggest that the *European Agenda 2030* also recognizes the use of financial instruments as innovative financing options. According to EIB (2018), both sources (grants and instruments) can be blended, which would cause additional savings. In the second step, by using our example of a real case study simulation, the effect of paid grant with possible use of current financial instruments sources in PPP contracts available to the EU member states (EC 2017) will result in a reduction of contracted unitary charges in the mentioned cultural revitalization project by additional 3 percentage points, approximately 17 % (7.37 €/m<sup>2</sup>) from the initially contracted unitary charge (ESIF 2017), as displayed in Figure 5.

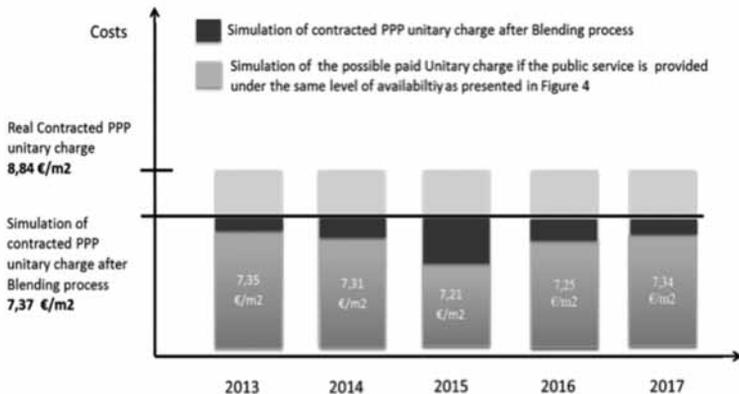


**Figure 5:** VfM analysis with grant and financial instrument effect

Although using various PPP models for revitalization of cultural heritage sector is still in the minor in many EU member states, using these models may result in achieving a significant VfM in public sector cultural projects. While the process of blending presents a new opportunity for the public sector, unfortunately, there is still a lack of knowledge and willingness to implement these “hybrid” structures. The case study simulation based on a real project shows the possibility of realizing significant savings from the contracted unitary charge at the beginning of the PPP contract by at least 17 % – if we apply blending options after tendering procedure or if we take into consideration conventional procurement. Consequently, 25 % (17 % + 8,3 %) of savings could be achieved during the whole-life-cycle period. The contracted unitary charge in our case study project before blending is 8.84 € per square meter and it will be paid only if the public service is 100 % available. After the blending process, the new contracted unitary charge is at 7.37 €/m<sup>2</sup> (as shown in Figure 5).

The last part of the analysis includes price simulation of the same level of project availability during 2013–2017 as displayed in Appendix 1 and Figure 3 – if in the same period the blend-

ing process existed in the public sector. Considering Figure 3, the historical ratio of contracted (8.84 €/m<sup>2</sup>) and actually paid unitary charges, we can simulate the costs of the public service during 2013–2017, assuming there was the possibility of blending EU grants and financial instruments in the same period. The simulation is shown in Figure 6.



**Figure 6:** Simulation of paid unitary charge with the effect of blending (based on data from Figure 4).

Figure 3 gives the possible correlation between the contracted unitary charge and unitary charge that is actually paid during the 2013–2017 period. Figure 6 shows the new contracted unitary charge of 7.37 €/m<sup>2</sup> after the blending process is finished and possible unitary charge payments if the public service is provided, under the same level of availability as presented in Figure 3 for the period 2013–2017. The blending effect clearly indicates that the price of the public service presented in a form of unique unitary charge could have been available at the average price of 7,34 €/m<sup>2</sup> (according to Figure 6) and results with significant public sector savings.

Today there is a relatively huge lack of research focusing on the efficiency of blending PPP models with different financing mechanisms in cultural heritage sector. Only several researches made a comprehensive analysis of blending. For example, Rogić-Lugarić, Dodig and Bogovac (2019) were focused on blending energy efficiency projects only, while Juričić and Kušljčić (2014) were focused only at combining PPP and EU grants. Ferrer and Behrens (2011) were focused only at combining conventional procurement and financial instruments. As the *New Cultural Agenda for Europe* is trying to foster cultural revitalization investments, according to Kaczmarek et al. (2018), it is crucial to develop new or improve existing policies. Therefore, this research is an attempt to show the synergy effect in cultural revitalization sector concerning the efficiency of PPP models and simulation of possible blending effectiveness with both EU grants and financial instruments (based on a real case study example in cultural heritage sector).

## Conclusion

Although many EU member states have a long tradition of revitalization of the cultural heritage projects through traditional procurement, rising public sector deficit and debt has become a significant obstacle to purely-granted cultural investments. The *New EU Agenda for Culture* proposed by the European commission fostered using more PPP options and innovative financing solutions for investments in cultural sector. According to that, the aim of this paper was to test the efficiency of a possible PPP model application with available innovative financing options based on a Croatian case study example.

According to the analysis, three possible delivery options have been identified. Besides the conventional procurement, PPP

models and privatization model have been found. The key difference between different procurement options is transferring operational project risks to the private sector. While the conventional procurement has a limited risk transfer, PPPs are based on providing overall public services within fully private responsibility for a certain period of time. Privatization, however, presents a complete loss of public sector influence for a proposed project.

The effectiveness of blending solutions using EU grants and financial instruments have been tested based on a Croatian case study example and data of contracted and paid unitary charge in operational period. The analysis has shown that it is possible to increase the level of effectiveness in the whole-life-cycle costs by more than 25 % compared to conventional procurement. Additional private sector discipline and payment mechanism based on the rule “100 % availability means 100 % payment and, vice versa, 0 % availability means 0 % payment” has demonstrated significant public sector savings through paying only for those services that have actually been delivered. Any incomplete provision of services or partial availability of investments automatically causes public sector payment deduction. In conventional procurement, revitalization of cultural projects is usually financed from classic budget finance and available public sector grants, while possible combinations of grants and other mentioned options are possible only if there is enough institutional and administrative public sector capacity which understands all advantages and drawbacks of such operations.

This paper has presented an attempt to identify the process of allocation of innovative financing options with PPP models and an effectiveness estimate of blending process. The findings of this paper can aid decision-makers in selecting the op-

timal revitalization of cultural heritage project implementation model which would offer the highest VfM to the public sector.

## References

AIK – Agency for Investments and Competitiveness. 2018. [Http://investcroatia.gov.hr](http://investcroatia.gov.hr) (accessed 12. 12. 2018).

AIK – Agency for Investments and Competitiveness. 2017. AIK Manual. Combining EU Funds and Public-Private Partnership Projects. [Http://www.aik-invest.hr/wp-content/uploads/2017/05/prirucnik\\_hr\\_full.pdf](http://www.aik-invest.hr/wp-content/uploads/2017/05/prirucnik_hr_full.pdf) (accessed 4. 12. 2018).

Becker, Sacha O.; Egger, Peter. H.; Von Ehrlich, Maximilian. 2010. Going NUTS. The Effect of EU Structural Funds on Regional Performance. *Journal of Public Economics* 94, no. 9: 578–590.

Bing, Li; Akintoye, Akintola; Edwards, Peter J.; Hardcastle, Cliff. 2005. The Allocation of Risk in PPP/PFI Construction Projects in the UK. *International Journal of Project Management* 23, no. 1: 25–35.

Cheung, Ester; Chan, Albert P. 2013. Revitalizing Historic Buildings through a Partnership Scheme: Innovative Form of Social Public-Private Partnership. *Journal of Urban Planning and Development* 140, no. 1: <https://ascelibrary.org/doi/10.1061/%28ASCE%29UP.1943-5444.0000161>.

Cifrić, Ivan. 2014. Očuvanje baštine u kontekstu Europske unije. *Adrias* 20: 9–19.

Croatian Ministry of Regional Development and EU Funds. 2017. Operational Report Competitiveness and Cohesion

2014–2020. [https://strukturnifondovi.hr/wp-content/uploads/2017/03/OPKK\\_hrv-1.pdf](https://strukturnifondovi.hr/wp-content/uploads/2017/03/OPKK_hrv-1.pdf) (accessed 3. 12. 2018).

Della Spina, Lucia; Calabrò, Francesco. 2018. Decision Support Model for Conservation, Reuse and Valorization of the Historic Cultural Heritage. In: International Conference on Computational Science and its Applications – ICCSA 2018, 3–17. Ed. Osvaldo Gervasi. Berlin: Springer.

EC – European Commission. 2017. Private Finance for Energy Efficiency (EU Program PF4EE). [https://ec.europa.eu/clima/policies/budget/life/instruments\\_en](https://ec.europa.eu/clima/policies/budget/life/instruments_en) (accessed 2. 3. 2018).

EC – European Commission. 2018. Publication of New EU Agenda for Culture: Strategic Framework. [https://ec.europa.eu/culture/policy/strategic-framework\\_en](https://ec.europa.eu/culture/policy/strategic-framework_en) (accessed 12. 12. 2018).

EPEC – European Investment Bank, European PPP Expertise Centre. 2015. Value for Money Assessment: Review of Approaches and Key Concepts [https://www.eib.org/attachments/epec/epec\\_value\\_for\\_money\\_assessment\\_en.pdf](https://www.eib.org/attachments/epec/epec_value_for_money_assessment_en.pdf) (accessed 16. 12. 2018).

EPEC – European Investment Bank, European PPP Expertise Centre. 2016. Blending EU Structural and Investment Funds and PPPs in the 2014–2020 Programming Period. Guidance Note on January 2016. [http://www.eib.org/attachments/epec/epec\\_blending\\_ue\\_structural\\_investment\\_funds\\_ppps\\_en.pdf](http://www.eib.org/attachments/epec/epec_blending_ue_structural_investment_funds_ppps_en.pdf) (accessed 2. 2. 2018).

ESIF – European Structural and Investment Funds. 2017. EU Policy Document: Financial Instruments under the ESIF. [http://eesi2020.eu/wp-content/uploads/2016/05/Questionnaire\\_Croatia.pdf](http://eesi2020.eu/wp-content/uploads/2016/05/Questionnaire_Croatia.pdf) (accessed 10. 12. 2018).

Ferrer, Jorge N.; Behrens, Arno. 2011. Innovative Approaches to EU Blending Mechanisms for Development Finance. Special Report 2011. Brussels: Centre for European Policy Studies.

Garrido, Laura; Gomez, Juan; de los Ángeles Baeza, María; Vassallo, José M. 2017. Is EU Financial Support Enhancing the Economic Performance of PPP Projects? An Empirical Analysis on the Case of Spanish Road Infrastructure. *Transport Policy* 56: 19–28.

Hannon, Matthew J.; Foxon, Timothy J.; Gale, William F. 2013. The Co-Evolutionary Relationship between Energy Service Companies and the UK Energy System: Implications for a Low-Carbon Transition. *Energy Policy* 61: 1031–1045.

Hribar Šmid, Mateja; Ledinek Lozej, Špela. 2013. The Role of Identifying and Managing Cultural Values in Rural Development. *Acta Geographica Slovenica* 53, no. 2: 371–378.

Jelinčić, Daniela A.; Tišma, Sanja; Senkić, Matea; Dodig, Domagoj. 2017. Public-Private Partnership in Cultural Heritage Sector. *Transylvanian Review of Administrative Sciences* 13: 74–89.

Juričić, Damir; Kušljčić, Danijel. 2014. Ekonomika kombiniranja subvencija s javno-privatnim partnerstvom. *Ekonomski pregled* 65, no. 1: 56–88.

Kaczmarek, Stella; Połusznna, Joanna. 2018. Forms of Financing the Cultural Sector in Poland against the Background of Solutions from Selected European Countries. Bielsko-Biała: Wydawnictwo Wyższej Szkoły Finansów i Prawa w Bielsku-Białej.

Macdonald, Susan. 2011. Leveraging Heritage: Public Private, and Third-Sector Partnerships for the Conservation of the Historic Urban Environment. In: ICOMOS 17th General Assembly,

Paris, France. [Http://openarchive.icomos.org/1303/](http://openarchive.icomos.org/1303/) (accessed 14. 12. 2018).

Matečić, Ingeborg. 2016. Specific Characteristics of the Tangible Cultural Heritage Valuation Process in Tourism. *Acta turistica* 28, no. 1: 73–100.

Marino, Angelica; Bertoldi, Paolo; Rezessy, Silvia; Boza-Kiss, Benigna. 2011. A Snapshot of the European Energy Service Market in 2010 and Policy Recommendations to Foster a Further Market Development. *Energy Policy* 39: 6190–6198.

Psychogiopoulou, Evangelia. 2018. Cultural Heritage in European Union Law and Policies. *Legal Issues of Economic Integration* 45, no. 2: 177–198.

Rogić Lugarić, Tereza; Dodig, Domagoj; Bogovac, Jasna. 2019. Effectiveness of Blending Alternative Procurement Models and EU Funding Mechanisms Based on Energy Efficiency Case Study Simulation. *Energies* 12, no. 9: 1612.

UNESCO – United Nations Educational, Scientific and Cultural Organization. 2018. World Heritage review. <https://whc.unesco.org/en/review/> (accessed 20. 12. 2018).

Vecco, Marilena. 2010. A Definition of Cultural Heritage: From the Tangible to the Intangible. *Journal of Cultural Heritage* 11, no. 3: 321–324.

Yescombe, E. R. 2007. *Public-Private Partnerships: Principles of Policy and Finance*. Oxford: Butterworth-Heinemann.

Zhao, Yawei. 2015. China's Leading Historical and Cultural City: Branding Dali City through Public-Private Partnerships in Bai Architecture Revitalization. *Cities* 49: 106–112.