Social value added (SVA) as an adaptation of economic value added (EVA) to the specificity of cultural institutions

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Abstract

Purpose: The purpose of this article is to present the concept of social value added (SVA) as a tool for measuring the effectiveness of the activity of not-for-profit cultural institutions.

Methodology: A direct application of the measure of economic value added (EVA) in the case of evaluation of non-profit activity of cultural institutions would be impossible because of the specificity of such organizations, which – as distinct from standard enterprises – are not oriented on generating financial gains. The article covers several successive modifications of EVA, which lead eventually to the measure of social value added (SVA). This parameter represents the difference between the social impact of an evaluated institution and the social cost of capital involved in the conducted activity. A positive SVA means that the activity carried out by the institution subject to evaluation is socially viable. The method of SVA calculation presented in the article has been supported by a numerical example.
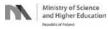
Findings: The modifications presented in this article make it possible to adapt economic value added (EVA) to the needs and specificity of not-for-profit public cultural institutions. Applying a modified EVA parameter, that is SVA, in cultural institutions may facilitate the process of management and the measurement of effective utilization of resources of these entities.

Originality/value: Published sources seldom tend to cover the tools improving management process or making it possible to measure the effects achieved by public cultural institutions. The solution discussed in this paper is a contribution to the body of reference literature in the said scope.

Keywords: economic value added (EVA), public cultural institutions, cost-benefit analysis, efficiency assessment

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Introduction

Management sciences and business practice have developed many tools and methods improving business management processes and measurement of enterprises' performance. There are plenty of published sources discussing models whose application makes it possible to use resources invested in commercial projects more efficiently. However, solutions that could be applied by not-for-profit organizations, whose activity is not oriented toward financial gains, are presented much less frequently. This also applies to not-for-profit cultural institutions.

The source literature on managing cultural institutions has emphasized the need to implement solutions which would make it possible to manage such entities effectively and efficiently (Matt, 2006, pp. 27–29; Brooks, 2006; Sójka et al., 2009, p. 63; Wnuczak, 2014). The most often discussed methods supporting management and measurement of performance of cultural institutions include: ratio analysis (Ames, 1990; Schuster, 1997; Kushner, 1996; Gilhespy, 1999; Wnuczak, 2015), cost-and-benefit analysis (Stanziola, 2008; Baker, 1998; Hansen et al., 1998), frontier techniques, especially DEA – data envelopment analysis (Taalas, 1998; Barrio et al., 2009), and analyses of the impact of cultural institutions on economic development (Plaza, 2000; Palmer, 2002). Although there are works devoted to the issue of efficiency in managing cultural institutions, the topic requires further studies, which would make it possible to develop solutions supporting the management processes taking place in such entities.

In light of the above, the author of this paper has decided to explore the possibilities of applying the concept of economic value added (*EVA*) in the process of measurement of the performance of cultural institutions. *EVA* is one of the most common measures applied to assess the outcomes of business activity. It seems that introducing several modifications to the way calculations are done as part of this measurement method would make it possible to apply this measure successfully in the evaluation of performance of cultural institutions. The author intends to present the said modifications and the process of adapting the *EVA* parameter to the needs of the institutions in question. Economic value added (*EVA*) 'adjusted' to the specificity of cultural institutions may be referred to as social value added (*SVA*). The measure may be applied in institutions engaged in cultural activities, supporting their managers in verifying the rationality of the adopted course of action. It may appear that their application in public cultural institutions may have a positive effect on the level of social satisfaction with the state's ability to provide the expected public goods and services (Alwasiak et al., 2014). The subject raised in the article is all the more important in light of the growing debt in particular countries' (Rae, 2016) budgets spent on the activity of public cultural institutions.

Economic value added (EVA) as a measure of increase in company value

Economic value added (*EVA*) is a measure developed by Stern Stewart & Co. from New York. Its purpose is to determine the increase in the value of a company for the company's owners. *EVA* is the difference between a company's operating profit after tax and the total cost of capital. The formula used to determine *EVA* is as follows (Cwynar and Cwynar, 2002, p. 85):

$$EVA = EBIT * (1 - T) - WACC * CI$$ (formula 1)

where:
EVA – economic value added,
EBIT – earnings before interest and taxes, i.e. the difference between operating revenues and operating expenses,
T – income tax rate,
CI – capital invested by the owners and the interest-bearing capital of creditors (calculated as the sum of equity and interest-bearing liabilities),
WACC – weighted average cost of capital.

The value of the weighted average cost of capital (WACC) included in the abovementioned formula may be calculated by using the following formula (Wnuczak, 2011; Koziol, 2014):

$$WACC = \frac{D}{D+E} * r_d * (1-T) + \frac{E}{D+E} * r_e$$ (formula 2)

where:
D – interest-bearing debt,
E – equity,
r_d – average rate of interest on debt (cost of debt),
r_e – rate of return expected by owners (cost of equity).

EVA makes it possible to determine the real value of the economic profit generated by a company. It is much different from net profit calculated according to financial accounting principles, as the latter does not take the cost of equity into account. In other words: *EVA* describes the profit that remains with the company's owners when the total cost of capital is taken into account, whereas the accounting profit takes only the cost of debt into account (disregarding the cost of equity) (Wallace, 1997).

According to contemporary finance theory, if the value of the future discounted *EVA* exceeds zero, then the company creates value for its owners. The above regularity may be proven by analyzing the company valuation formula presented below (Fernandez, 2007):

$$V = CI + \sum_{t=1}^{\infty} \frac{EVA_t}{(1 + WACC)^t}$$ (formula 3)

where:
V – company value including debt incurred by the valued entity.

An analysis of the said formula shows that if the sum of future discounted *EVA* is zero, the value of the valued company including debt (*V*) equals the value of the capital invested (*CI*). The creation of value for the company's owners occurs only insofar as the sum of future discounted *EVA* is greater than zero because the company's value, including debt (*V*), exceeds the value of the capital invested (CI). Therefore, *EVA* is treated as an important measure of the efficiency and performance of business activity. It provides direct feedback on whether the course of action adopted by a company leads to an increased profit for the company's owners.

Published sources include voices of both proponents and opponents of using *EVA* to measure the economic performance of companies. The former argue mainly for a better – compared to standard accounting measures – correlation of *EVA* with changes in the market value of stocks (O'Byrne, 1997). They also point to a number of advantages resulting from the implementation of the *EVA* parameter to the organization's management systems. These advantages include: encompassing all aspects of management (Cordeiro and Kent, 2001), improved communication and quicker decision-making (Cordeiro and Kent 2001), improved utilization of company resources (Słoński, 1999), improved awareness of managers in the scope of their impact on company performance (Wallace, 1998), and ensured access to information significant from the viewpoint of management (Chen and Dodd, 1997). The critics of *EVA*, in turn, stress that their studies have not proven that companies which adopted the EVA parameter performed better than those which used different measures (Appleby, 1997; Griffith, 2004; Fernandez, 2001). Although the opinions concerning the effectiveness of EVA in the scope of improving business performance are divided, there is no doubt that it is a tool that is helpful in effective management, and that it is highly popular among business practitioners and managers alike (Szymański, 2014). On account of the fact that it is a tool suited to the reality of companies whose main objective is to generate financial gains for their owners – it may not be implemented directly in not-for-profit

cultural institutions. The process of application of EVA in such entities requires a series of adaptive measures, which will be covered in the further part of this paper.

Adaptation of EVA to the specificity and needs of cultural institutions

Unlike in the case of business enterprises, the main objective of cultural institutions which act as non-profit organizations is to generate effects of non-commercial nature. Using a certain degree of simplification, it may be said that cultural institutions are to fulfil a broadly understood social mission while following principles of effective utilization of the available resources. Such a definition of the objectives of an activity makes it impossible to apply an EVA-based profit indicator to measure the performance of cultural institutions.

The classic approach to EVA allows us to measure the operating profit generated by a company after deducting the total costs of financing the company's operation using both debt and equity. In the case of cultural institutions, it does not matter so much if the profit made on the pursued activity exceeds the cost the capital involved – after all, by definition such an activity does not have to be financially viable, so it does not have to offer the rate of return expected by owners of the institutions in question. However, the activity pursued by cultural institutions should generate profit in the form of benefits for society. In other words, the result of the implementation of culture-related projects does not have to involve financial gains, but rather the desired social impact (Wnuczak, 2017, p. 127). Taking into account the specificity of cultural institutions as described above, we can see that the *EVA* parameter adapted to the needs of such institutions should measure the difference between the social impact generated by a given institution and the social cost of the capital involved therein. The result of such a calculation, based on an analogy to the concept of *EVA*, can be defined as social value added (SVA). A positive SVA would mean that the social impact of a given activity exceeds the social cost of capital, which would prove that this activity is valuable, i.e. 'socially profitable.' The further part of this paper covers the method of calculation of *SVA* and its components.

Earnings before interest and taxes (EBIT) and 'social' earnings before interest and taxes (SEBIT)

A standard operating result (*EBIT*) is the difference between operating revenues and operating expenses. In order to adapt the concept of EBIT to the nature of the activity

of cultural institutions, it is crucial to calculate it along with taking into account the social benefits and costs of such an activity. The process is the first step in transforming earnings before interest and taxes (*EBIT*) into 'social' earnings before interest and taxes (*SEBIT*), and it can be carried out using a cost-benefit analysis (*CBA*), which involves estimating the difference between all benefits generated by a given project and the costs incurred to arrive at such benefits (Cervone, 2010). Costs and benefits should take cash flows into consideration, and cover those aspects of the impact of a given project, which do not represent direct financial income and expenditure. A *CBA* should thus take into account all costs and benefits that will have an impact on both immediate and intermediate beneficiaries of a given project (*Analiza kosztów...*, 2003, p. 154, Wnuczak, 2017, p. 128). When preparing a *CBA*, it is necessary to try to carry out a valuation of all effects of the analyzed policy in monetary terms, so that the analysis includes estimates of values of the biggest possible number of social effects generated by the project in question (*The Green Book*, 2013).

The unquestionable advantage of using *CBA* is the flexibility of the method, which makes it applicable in various types of projects, especially those of social nature. *CBA* allows us to assess the broadly understood impact of projects on different stakeholders (DEAT, 2004). The biggest difficulty in the application of *CBA* is the valuation of the generated costs and benefits. Although there are methods that make it possible to valuate these categories, in many cases, it is necessary to consider the assumptions adopted in the process of calculation of the project's outcomes as disputable and difficult to verify. In general, *CBA* is not a completely objective method, but it is a formalized tool to assess non-commercial projects addressed to society (Cervone, 2010).

The process of analysis of costs and benefits (*CBA*) includes several stages.[2] First, it is necessary to determine the objective of the project, which will make it possible to define the socio-economic benefits resulting from its implementation. Second, the project itself should be arranged as sequenced actions, sets of works, activities that need to be carried out to make it possible for the project to generate the intended effects. The next step is to determine the perspective of the analysis carried out to identify the stakeholders of the project and the territory it will impact. Only then is it possible to perform a project finance analysis, which involves calculation of the revenues and costs generated by the project in question. Moreover, since a *CBA* is carried

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[2]   Based on: Hanley and Spash (1993); Boardman et al. (2001, pp. 7–17); Ligus (2010, pp. 16–18); Wnuczak (2017); *Analiza kosztów i korzyści projektów inwestycyjnych: Przewodnik* (2003, pp. 20–43); *Przewodnik do analizy kosztów i korzyści projektów inwestycyjnych. Fundusze strukturalne, Fundusz Spójności oraz Instrument Przedakcesyjny* (2008).

out from the viewpoint of all potential beneficiaries of a given project, it is important to prepare a quantitative forecast of project outcomes and to value these outcomes in monetary terms.

Valuation of cultural assets for which there is no market value may be carried out on the basis of direct and indirect methods (Czajkowski, 2010). Indirect methods include revealed preference methods (*RPM*), which means they are based on observation of consumer behavior in real situations. The second group of valuation of non-market assets – direct methods – utilizes stated preference methods (*SPM*) with respect to the preferences of consumers of a given asset (Kachniewska, 2016). This method requires consumers to make a hypothetical valuation of the assets under analysis.

Among direct methods, there is one that deserves particular attention. This method is the **contingent valuation methodology** (*CVM*) (Mitchell and Carson, 1989; Braden and Kolstad, 1991; Hausman, 1993; Portney 1994), which involves conducting a study among the members of society included in a given project in order to check the **willingness to pay** (*WTP*) for a given asset or the **willingness to accept** (*WTA*) **a compensation for a lost asset**. The application of either of the two methods mentioned above requires conducting a number of questionnaire surveys and interviews with people who are directly or indirectly affected by the project in question. There is a developed version of the contingent valuation methodology, called **choice experiment method** (*CEM*), which makes it possible to analyze the preferences of the target audience through questionnaire surveys where respondents are asked to choose the best variant from among several ones (Giergiczny et al., 2014). Each variant is described using a specific set of qualities, with one of them being the cost of a given variant (Kachniewska, 2016). The main advantage of *CEM* compared to *CVM* is the possibility of estimating the value of every quality of the valued asset. In the case of *CVM*, valuation covers only the asset specified in the study – which means that the whole set of qualities related to such an asset is valued at a time. What is more, published sources show that *CEM*, as a more complex method, requires respondents to make a more careful analysis, which may yield more thought-out answers (Carlsson and Martinsson, 2001).

Calculation of benefits generated by cultural institutions based on indirect methods may also involve the **benefit transfer method** (*BT*), which is about taking advantage of earlier studies and matching them to the assets whose value is calculated at a given time (Bartczak et al., 2008). An undeniable advantage of such an approach is the relatively low cost and short time of conducting the studies. However, the method of benefit transfer may be encumbered with a significant margin of error because of the likelihood of a mismatch between the existing studies and the analyzed assets.

Valuation of benefits generated by cultural institutions is based less frequently on the **market price method** (*MPM*) and the **productivity method** (*PM*), both of which are categorized as indirect methods, like those discussed above. The former may be applied when the valued asset is an indirect object of a market transaction. Taking the non-profit nature of most cultural assets and services into account, we can see that the abovementioned assumption of a market price should be excluded. The method may, however, involve estimating the prices of non-commercial cultural assets based on the prices of alternative assets whose market value is known. For instance, it is possible to price the value of a play whose staging is financed from public funds (the ticket price is not a market price) if similar plays are staged by commercial institutions selling tickets at market prices. The main advantage of the presented method is its simplicity. Yet, it may be difficult to apply it in practice because of a lack of suitable and comparable market counterparts. The productivity method, in turn, makes it possible to determine the value of a given non-market asset through estimating its share in the production of other assets whose market value is known (Kachniewska, 2016). In the case of cultural assets, the application of this method is possible only when a cultural asset that is not offered at a market price is an element of a larger commercial event whose market value is known. In order to determine the value of a cultural asset, it would be necessary to find how much the value of the whole event would decrease if the analyzed cultural asset was removed from the event's program.

Direct methods form a separate group of methods of valuation of non-market assets. One of the direct techniques applied in the valuation of cultural benefits is the **travel cost method** (*TCM*) (Clawson and Knetsch, 1994). Its advantage over CVM and CEM is that it is based on observation of real – not hypothetical – behavior. The method assumes that the time devoted to a visit to a given cultural institution and the cost of travel reflect the visitors' readiness to pay for access to a given asset. There are two methods of calculation of travel costs: the individual travel cost model (*ITCM*) and the so-called zonal travel cost model (*ZTCM*) (Wnuczak, 2017, p. 141). Another method of calculating benefits generated by cultural institutions may be the **hedonic price method** (*HPM*) (Moorhouse and Smith, 1994). It involves valuating non-market assets by determining the extent to which such assets affect the value of an asset whose market value is known. For instance, the value of a real estate property may grow with the increasing proximity to parks and greenery. Comparing the value of real estate properties located further away from parks to the value of those found in the immediate vicinity of parks may let us estimate the value of the existing greenery (Donovan and Butry, 2010; Walter and Schläpfer, 2010).

When performing a CBA, it is important to consider not only social benefits, but also costs related to the operation of a given cultural institution. Such costs should include most of all (Wnuczak, 2017, p. 145):

- costs of lost opportunities (e.g., making buildings available to a cultural institution free of charge while it might be possible to use them for commercial purposes – which could generate a real financial profit),
- reduced income of various institutions, which could result from the activity pursued by a not-for-profit cultural institution,
- negative impact of a culture-related project on the natural environment (e.g., devastated landscape, contamination of water).

A *CBA* makes it possible to estimate the benefits and costs generated by cultural institutions. In order to determine the value of social earnings before interest and taxes (*SEBIT*), the obtained values of benefits and costs should be added to the value of earnings before interest and taxes (*EBIT*). This is the first step that allows us to transform a typical indicator of operating result (*EBIT*) into a result gained from social activity (*SEBIT*).

Another modification of the operating result (*EBIT*), which needs to be performed to adapt it to the framework of assessing the performance of cultural institutions, involves taking into consideration the impact of the analyzed cultural institution on economy. According to published sources, there is a number of economic advantages gained from the existence and activity of cultural institutions. These include: direct and indirect impact of the sector of culture on employment (Bryan et al., 2000; Selwood, 2001), impact on local economies, resulting from purchases made by cultural institutions (Bryan et al., 2000), direct and indirect impact on the development of local economies through stimulation of tourism – tourists visiting cultural institutions pay for tickets and take advantage of complementary services (e.g. the purchasing of souvenirs, spending on hotels and restaurants) (Vaughan, Farr and Slee, 2000; Plaza, 2000), a multiplier effect involving development of different businesses under the influence of an additional consumer demand generated through the activity of cultural institutions (Bryan et al., 2000, Wavell et al., 2002). In practice, however, presenting the impact of the abovementioned factors on the development of economy in monetary terms is difficult. This kind of analysis should be performed with great care so that it takes into account only the expenses generated as a result of the activities related to the functioning of the analyzed culture-related project (Palmer, 2002). In other words, it is necessary to prove that if it was not for the analyzed cultural

event, the money indicated in the analysis would not have been spent in a given local economy (Wnuczak, 2017, p. 136).

The last correction to be made in the calculation of a typical operating result (*EBIT*) to arrive at the value of the social benefit (*SEBIT*) involves adjusting the calculation by the value of all cash flows categorized as a transfer of resources from one entity to another within a given society (*Przewodnik do analizy...*, 2008, p. 58). Customs duties, taxes, subventions, and subsidies are exactly such a type of transfer. An example of transfer from one entity to another includes social insurance contributions paid by cultural institutions. On the one hand, these contributions are paid to the Polish Social Insurance Institution (PL: ZUS) and are considered a cost of the institution paying them, but on the other hand, such a contribution should make its way back to society through a redistribution mechanism. On account of the above, if such a cost has been considered in the calculation of an operating result (*EBIT*), it is necessary to add the value of such a cost to the value of *EBIT* in order to determine the social result (*SEBIT*) of a given project. Other examples of such transfers include, for instance, charges for CO_2 emissions, income tax, and non-reimbursable VAT (*Przewodnik do analizy...*, 2008, p. 58).

Taking into consideration the abovementioned principles of adaptation of the operating result (*EBIT*) to the context of calculation of social value added (*SVA*), arriving at the value of the result of social activity (*SEBIT*) requires adjusting EBIT by: social benefits and costs (calculated according to the CBA methodology), economic benefits, and cash flows in the form of transfers from one entity to another within a given society. To sum up, the formula that would make it possible to determine the value of the social benefit (*SEBIT*) of the implementation of a given project should be as follows:

$$SEBIT = EBIT * (1 - T) + B + C + E + TR \qquad \text{(formula 4)[3]}$$

where:
SEBIT – result of activity undertaken to benefit society,
B – social benefits resulting from activity pursued by cultural institutions (calculation of such benefits should be done using one of the methods presented in this paper),
C – social costs resulting from activity pursued by cultural institutions (calculation of such benefits should be done using one of the methods presented in this paper),
E – value of economic benefits resulting from culture-oriented activity,
TR – cash flows in the form of transfer of resources from one entity to another within a given society.

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[3]   On account of the fact that not-for-profit cultural institutions do not pay income tax, the expression (1 –T) may be omitted in calculations.

The value of the result of activity undertaken to benefit society, or of the 'social earnings before interest and taxes' (*SEBIT*), determined following the abovementioned method should be used in the process of calculation of social value added (*SVA*).

Cost of capital in the assessment of activity of not-for-profit cultural institutions

Another adjustment that is necessary to determine the *SVA* for cultural institutions engaged in non-profit activity involves making appropriate assumptions for the cost of capital. In the case of a standard calculation of *EVA,* the expected rate of return is expressed in the form of the weighted average cost of capital (*WACC*) – formula 2. The value of interest-bearing debt (*D*) and the book value of the equity involved (*E*), which both need to be determined to find *WACC,* may be taken from the balance sheet of the institution subject to analysis, although the literature indicates that equity shares should reflect market values rather than book values (Jackowicz et al., 2017). Establishing the cost of debt (r_d) should not be difficult either because such information is available in documents confirming that the activity of a given organization in question is financed with debt. Difficulties may appear at the stage of estimating the rate of return expected by equity providers. Calculation of this value for commercial projects is most often made based on the *CAPM* (*Capital Assets Pricing Model*) method (Mielcarz and Wnuczak, 2011). The approach takes risk-free rate and equity risk premium into account (Kurek, 2009). Given the non-commercial nature of the activity of cultural institutions, CAPM may not applied in the calculation of the cost of equity in the case of such organizations. It is, therefore, necessary to apply the social discount rate, which considers the method of evaluation of future costs and benefits in relation to current costs and benefits from a social perspective (Catalano et al., 2014).

Published sources point to the necessity of taking the time preference rate and the capital productivity rate into consideration when calculating the social discount rate (Ligus, 2010, p. 52). The time preference rate represents the preference for future consumption over present consumption. The capital productivity rate represents the cost of opportunities lost as a result of investing capital in a given project. Detailed guidelines concerning the methodology of calculation of the discussed rates are provided in relevant published sources.[4] There are also sources presenting values of discount rates recommended as applicable in assessment and evaluation of social activity (Catalano et al., 2014; Florio, 2014).

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[4]   See: Lines (1996, p. 89); Spackman, 2007; Florio (2014); Markandya and Pearce (1988); Pearce and Turner (1990, p. 130); Winpenny (1995, pp. 100–101).

In light of the above, when calculating the weighted average cost of capital (WACC) to arrive at SVA for a cultural institution, it is necessary to substitute the cost of equity with social discount rate (*SDR*). The formula that will make it possible to determine the social weighted average cost of capital will be therefore as follows:

$$SWACC = \frac{D}{D+E} * r_d * (1-T) + \frac{E}{D+E} * SDR \qquad \text{(formula 5)}^3$$

where:
SWACC – social weighted average cost of capital,
SDR – social discount rate.

The concept of social value added (SVA)

In view of the discussion presented above, we can see that social value added (*SVA*) should measure the difference between the social benefits generated by a given institution and the social cost of the capital involved. Therefore, if we know the formula to calculate *EVA* (formula 1), *SVA* should be calculated as follows:

$$SVA = SEBIT - SWACC * CI \qquad \text{(formula 6)}$$

According to the concept of *EVA*, if the analyzed cultural institution generates an *SVA* greater than zero, this means that there is a surplus of the social benefit over the social cost of capital, which implies at the same time that the activity pursued is socially profitable. Otherwise (i.e., *SVA* lower than zero), the result of the pursued social activity will not cover the rate of return on the said activity expected by society, and the operation of the analyzed institution may be considered unprofitable from a social point of view. Thus, *SVA* may become a sort of system to verify the effectiveness and reasonability of activities undertaken by not-for-profit cultural institutions.

Case study – application of SVA in practice

The methodology of calculation of *SVA* has been illustrated with an example of data of a hypothetical museum, engaged in a non-profit activity, subsidized from a local

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[5]   On account of the fact that not-for-profit cultural institutions do not pay income tax, the expression (1 –T) may be omitted in calculations.

government budget. The calculations have been made for three variants of the activity of the analyzed institution.

An assumption has been made that the institution is visited each year by 100,000 people, and the average ticket price is 6 PLN. The data has been used to determine the annual value of revenues of the museum in question. Values of particular prime costs generated each year by the institution in question are also known. Based on the information about the operating costs and revenues of the institution, the institution's operating result has been determined using the aforementioned formula 1. It has been assumed at this stage that each of the considered variants will be based on the same financial data. Detailed calculations are shown in Table 1.

Table 1. Calculation of earnings before interest and taxes (EBIT)

	Variant I	Variant II	Variant III
Operating revenue	**600 000**	**600 000**	**600 000**
Average ticket price	6	6	6
Number of visitors	100 000	100 000	100 000
Cost of operation	**670 000**	**670 000**	**670 000**
Amortization	5 000	5 000	5 000
Materials	50 000	50 000	50 000
External services	25 000	25 000	25 000
Remuneration	500 000	500 000	500 000
Social insurance	90 000	90 000	90 000
Operating result (EBIT)	**-70 000**	**-70 000**	**-70 000**

Source: own work.

The presented calculations show that the analyzed institution generates a loss at the level of its operating activity. From the financial perspective, such activity is therefore pointless. To examine the social rationality of the conducted activity, the calculation focused first on the social impact (SEBIT) of the museum's activity. To that end, according to the methodology presented in this paper, the social costs and benefits and adjustments affecting the social outcome of the conducted activity have been identified and valued. The first analyzed benefit is the surplus for customers taking

advantage of the cultural offer of the museum, resulting from the difference between the value of the analyzed asset and its actual price. Based on a *WTP* analysis, it has been found that customers are willing to pay an average of 10 PLN for the ticket in variant I and II, and 8 PLN in variant III. However, the actual ticket price is 6 PLN. Knowing the number of people visiting the museum, the total value of social benefits (*B*) resulting from the said surplus for consumers has been determined. The second adjustment to consider is the social cost (*C*), which is the effect of lost opportunities as suffered by the owner of the building where the museum operates. The institution in question uses a municipality-owned facility free of charge. Based on an analysis of market offers, it has been found that the potential profit that could be made by the municipality on letting the facility would amount to approx. 100,000 PLN per year. Since the facility has been made available to the museum free of charge, the value of the potential rent should be considered a social cost – the money gained from the rent could be redistributed by the municipality to cover the expenses of projects beneficial to the whole society. Another adjustment is related to the project's impact on the local economy (*E*). Based on an analysis of visits, it has been found that approx. 20% of visitors buy souvenirs in the museum gift shop. Knowing the average value of shopping made by the museum's visitors, and the average value of the margin made on the products sold, the value of the shop owner's profit has been calculated. The last adjustment is based on cash flows categorized as the transfer of resources from one entity to another within society (*TR*). In the case of the institution in question, social insurance contributions represent such cash flow. Based on the calculation of the museum's social costs and benefits and other adjustments, and knowing the value of the institution's operating result (*EBIT*), it was possible to determine the achieved social result (*SEBIT*). Details of the calculations are included in Table 2.

The calculations included in Table 2 show that the institution generates a positive value of the achieved social result (*SEBIT*) for each of the analyzed variants. In the case of variant III, the value is a bit lower than for the other two variants because of a lower value of the asset offered to customers.

In order to assess the social profitability of the activity of the museum in question, the value of the social cost of the capital involved in this activity has been determined. The museum's financial documents have revealed information about the amount and the rate of debt (*D* and r_d), and about the value of equity (*E*). Variants I and III have followed the same assumptions – different assumptions have been made for variant II. The social discount rate (SDR) for Poland has been determined on the basis of calculations by Florio (2014, p. 192). Based on the data above, according to formula 5 included

in this paper, the value of the social weighted average cost of capital (*SWACC*) has been calculated. The calculations are shown in Table 3.

Table 2. Calculation of 'social' earnings before interest and taxes (SEBIT)

	Variant I	Variant II	Variant III
Social benefits (B) — valuation based on WTP	**400 000**	**400 000**	**200 000**
Average value for customer based on WTP	10	10	8
Actual ticket price	6	6	6
Surplus per one consumer	4	4	2
Number of visitors	100 000	100 000	100 000
Social costs (C) — lost rental opportunities	**100 000**	**100 000**	**100 000**
Value of economic benefit (E)	**60 000**	**60 000**	**60 000**
Rate of visitors-shoppers	20%	20%	20%
Number of shoppers	20 000	20 000	20 000
Average value of purchase per one customer	10	10	10
Average margin on products sold in the shop	30%	30%	30%
Average profit per one customer	3	3	3
Cash flow in the form of transfer of funds (TR)	90 000	90 000	90 000
Benefits, costs, and other adjustments in total (B - C + E + TF)	**450 000**	**450 000**	**250 000**
Operating result (EBIT)	**-70 000**	**-70 000**	**-70 000**
'Social' operating result (SEBIT)	**380 000**	**380 000**	**180 000**

Source: own work.

Knowing the value of the institution's social operating result – *SEBIT* (Table 2), the social weighted average cost of capital (*SWACC*), and the capital involved (*CI*), the value of social value added (SVA) has been calculated for each of the analyzed variants. To that end, the aforementioned formula 6 has been applied. The calculations are shown in Table 4.

Table 3. Calculation of social weighted average cost of capital (SWACC)

	Variant I	Variant II	Variant III
Interest–bearing debt (D)	1 000 000	3 000 000	1 000 000
Equity (E)	3 000 000	6 000 000	3 000 000
Average rate of interest on debt (cost of debt) (rd)	7,0%	7,0%	7,0%
Social discount rate (SDR)	4,43%	4,43%	4,43%
Social weighted average cost of capital (SWACC)	**5,07%**	**5,29%**	**5,07%**

Source: own work.

Table 4. Calculation of social value added (SVA)

	Variant I	Variant II	Variant III
Social operating result (SEBIT)	380 000	380 000	180 000
Social weighted average cost of capital (SWACC)	5,07%	5,29%	5,07%
Equity and interest-bearing capital of creditors (CI)	4 000 000	9 000 000	4 000 000
Social value added (SVA)	**177 100**	**-95 800**	**-22 900**

Source: own work.

In the case of variant I, the social value added (SVA) is greater than zero, amounting to 177,100 PLN, which means that the institution has generated a surplus of social benefit over the social cost of capital, and so its activity may be considered socially profitable. As for variants II and III, the social impact of the pursued activity does not cover the rate of return expected by society, which means that the museum's activity in these variants should be regarded unprofitable in social terms.

Comparing variant I and II, we can see that both generate the same value of the social operating result (SEBIT). In the case of variant II, the presented value of profit has been achieved thanks to the involvement of a much bigger amount of the capital invested (CI) – 4,000,000 PLN in variant I and 9,000,000 PLN in variant II. Therefore, variant II has yielded a negative SVA, which means that the social impact of the museum's activity is not sufficient to cover the social costs of the capital involved. Variant III is socially unprofitable as well. In this case, a comparison thereof with

variant I shows that the value of the asset provided by the museum as declared by consumers is lower (variant I – 10 PLN; variant II – 8 PLN).

The discussed example illustrates the methodology of calculating social value added (*SVA*). It also highlights two main areas of creation of *SVA*. A comparative analysis of the presented variants shows that SVA may be affected, among others, by modifying the value of social benefits generated by the analyzed institution and the value of the capital involved in this institution's activity.

Conclusion

This paper explores the methodology of adapting economic value added (*EVA*) to the needs and specificity of the activity pursued by cultural institutions. Adaptation measures should involve taking social benefits, costs, and other adjustments affecting the social impact of a given project into consideration when calculating its outcome for a given cultural institution. However, they should also focus on the social – not financial – cost of the capital involved in the implementation of culture-related projects. Considering the said adjustments in the calculation of the economic value added (*EVA*) of a given project will enable the determination of its social value added (*SVA*). An analysis of the *SVA* generated by the analyzed cultural institution allows us to assess the social profitability of the activity pursued by the institution in question. Institutions whose SVA is greater than zero are able to create and offer a social benefit whose value exceeds the social cost of the capital invested. The activity pursued by such institutions may be therefore considered profitable from a social point of view.

The proposed solution may act as a tool useful in managing cultural institutions, one that could contribute to a more efficient allocation of resources used in this kind of organizations. At the same time, it is important to stress that calculating SVA may appear to be challenging in many cases, given, for instance, the difficulties in estimating the social costs and benefits generated by cultural institutions. Finding these values often involves a number of complex analyses and a need to make certain assumptions in advance. Therefore, arriving at the value of SVA of the analyzed organizations' activity does not make it possible to formulate a clear, unambiguous assessment of the rationality of the efforts made by each such organization. However, an SVA analysis will offer a great deal of essential information concerning the social benefits resulting from the functioning of the analyzed institutions, and lay the foundation for a reflection on the efficiency and effectiveness of utilization of the available resources. Thus, regardless of the drawbacks of the SVA method in terms of calcula-

tions, it seems it may be fruitfully applied in the process of managing private cultural institutions.

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