Международное просветительское общественное объединение АКТ

CASE

CASE BELARUS

UNIVERSITAS MASARYKIANA BRUNENSIS

eúsav
Ekonomický ústav SAV
Institute of Economic Research SAS

COST-BENEFIT ANALYSIS OF PRISON AND POST-PRISON PROGRAMS: INTERNATIONAL EVIDENCE AND A BELARUSIAN CASE

Analytical report

Authors:
Sierž Naŭrodski (editor)
Michaela Horňáková
Martin Guzi
Veronika Hvozdíková
Marek Radvanský

supported by

Visegrad Fund

Ministry of Foreign Affairs of the Netherlands

Minsk, 2018

The project is co-financed by the Governments of Czechia, Hungary, Poland and Slovakia through Visegrad Grants from International Visegrad Fund. The mission of the fund is to advance ideas for sustainable regional cooperation in Central Europe.

TABLE OF CONTENTS

INTRODUCTION

This report presents the research by an international team of experts, which they concluded within a framework of ENCON project – Enhancing CSOs Contribution to Evidence-Based Policy Making for Vulnerable Groups in Belarus. The project has been implemented by CASE Belarus in cooperation with CASE (Poland), Institute of Economic Research of Slovak Academy of Sciences (Slovakia), The Faculty of Economics and Administration of Masaryk University (Czech Republic), as well as ACT (Belarus).

Main goal of the first (technical) part of this paper is to provide simple overview of available information related to application of social cost-benefit analysis, to determine the methodological approach selected for the assessment of applied social policies (in terms of pilot programs) in Belarus covered by the ENCON project. Application of in-depth social cost-benefit analysis is a difficult task. In this part of paper, we describe general methodological overview based on available sources. We also present potential adjustments or alternatives to CBA methodology with aim to simplify calculations or to use more tailored methods of assessment of social policies (focused on improvement of the status of various vulnerable social groups). In the second part of the paper, we present the challenges of application of CBA on prison programs and present selected cases of assessment of public programs aimed at reducing recidivism. Third part of the report presents cost-and-benefit analysis of selected employment enhancement services towards former prisoners in Belarus.

SOCIAL COST-BENEFIT ANALYSIS (SCBA)

The cost-benefit analysis (CBA) is traditional approach typically used to asses or compare weaknesses and benefits of available alternatives, previously related mainly to the public investments or infrastructure projects. In general, the methodology combines two main purposes. First, to verify whether the investment have positive cost/benefit ratio, thus if benefits and gains of the project application overweight its costs. Advantage of this approach (for example in comparison to simply evaluate the cost effectiveness) is monetization of the costs and benefits of all relevant factors including direct outcomes, externalities (socio-economic effects), opportunity costs and other qualitative effects. The monetization is time adjusted, thus all quantitative effects are discounted to the net present value of investment. Second, the CBA is used to compare alternatives of various projects to determine best applicable option, including retaining current state (status quo). It is also applicable to determine gained value for money to select the project suitable for financing under various budget constraints and policy targets. That is why CBA is one of the most common tools used to assess relative efficiency and effectiveness of public investment/intervention. It allows comparing of different «return-on-investment» of various programmes or policies, so it may be used to identify which programme/measure yields higher possible benefits for a given size of investment/ resources.

CBA should take into consideration value of all applicable costs and benefits, but there is often critique, that this analysis is trying to give monetary value to all factors, including social costs and benefits, which are often difficult to measure and could be perceived differently by all stakeholders, and therefore can be desirably adjusted by evaluators (including applied monetary values). Additionally, it is sometimes hard to avoid double counting in terms of direct and indirect effects. Therefore, the comparison of effects between various projects should be done by the same approach with clearly defined factors and values.

Social cost-benefit analysis

Specific type of CBA, social cost-benefit analysis, is a cohesive method to explore full range of impacts caused by a development project or a (social) policy measure. It can be used both, as an evaluation and a planning tool. It could provide answers to two basic questions

- has the programme/measure delivered the intended results for the invested resources?
- is there other alternative which would generate more effects (benefits) for the same resources invested?

with the aim to decide whether to improve existing/planned programme or measure, or to shift to a different alternative.

The social CBA is a useful tool for socio-economic appraisal of a programme or a policy measure, which can help decision makers to test, improve, optimize, or justify their decisions in various social and policy areas (infrastructure and energy projects, regional development and tourism, provision of social services to communities/individuals, etc.). This method composes financial effects (investments, profits, taxes, etc.) with societal effects (travel comfort, environment, health and safety and other indirect impacts). The idea is to estimate price («price» in a sense of a value given by a society to certain effect) of as many aspects as possible, with aim to scale various heterogeneous effects in uniform way. The main advantage is that in this way, different projects or alternatives can be compared, what enables public parties (investors) to decide on the best option, given the circumstances. Besides this, the project can be compared also with a baseline scenario (the situation of the most likely scenario if the tested project/measure will not be implemented; null alternative).

The social CBA weighs all kinds of costs and benefits: the ones with direct effect on project participants/measure's target group or agents involved; the ones which have indirect effect on the persons/agents related to the original target group; and external effects (may be related to safety, transport, environment, public goods, etc.). These types of identified effects are either monetized, or they are given a value so that they can be compared (e.g. on a scale 0–10 as appraised by the stakeholders). The process of monetizing effects is the biggest advantage of the method, but also a weakness – it influences the outcomes of the CBA, introduces subjective element into calculations, and the prediction remains uncertain, so the results of the social CBA are never absolute. However, when comparing two alternatives, or comparing intended project to a null alternative, even the simplified or rough CBA is better than none. The social CBA should also reveal who bears the costs and which group is getting the benefits («distribution of costs and benefits»). Besides monetization of as much effects as possible, ability to compare alternatives/or to compare intended intervention to a null alternative, uncovering the distribution of costs and benefits; another advantage of the social CBA approach is ability to calculate a risk and show uncertainties, so that policy decisions are based on calculated risks.

Since CBA approach is usually used to assess efficiency and effectiveness of public investments, its main purpose is to answer the question which intervention should be abandoned in favour of more effective one. The limitation is a lack of capacity to execute CBA by (smaller) public investors, especially at the local level. CBA is an appropriate tool for local governments, but also for NGOs, in order to select or improve projects or policy measures at the local or community level. To enhance utilization of the CBA approach, the widely consensual standardization of the methodology, as well as building capacities of local governments and NGOs to undertake CBA-kind analyses when evaluating social projects/programmes, are needed.

Understanding CBA (Simplified description of its stages)

There are several approaches to undertake social (policy) CBA, but we can identify these basic steps:

1) Identification and quantification of costs and benefits (gross outcomes)

2) Outcomes are adjusted by counterfactual and by attribution of other actors (getting the net outcomes)

3) Monetization of costs and net outcomes (impacts)

4) Discounting costs and impacts

1. Identification and quantification of costs and benefits

As identification of intervention's costs is much less difficult (including quantification/ monetization), we will start with the benefit side of CBA and will focus on outcomes and impacts of the intended project/ programme, hereinafter called intervention. Outcomes may be positive and negative and can be defined as a change (positive or negative) which occurred since the intervention has been implemented (or expected change). The identification of such changes related to the intervention can be based on stakeholders assessment, or based on verification of a hypothesis (e.g expected income changes may be tested no matter if stakeholders identified this change or not). But engaging stakeholders to the identification of outcomes leads to more robust results.

NOTE: When building the set of outcomes = changes observed in relation to the intervention, there are two options: either the investor/evaluator pre-defines the outcomes and the measurement is to verify the pre-defined hypothesis (e.g. investor expects that the new policy will improve health of stakeholders so he sets «reduced morbidity» as an indicator of health outcome and examines it to verify his hypothesis), or stakeholders themselves identify changes they have experienced in relation to the intervention. The second option may omit some changes (stakeholders may not realise their health improvement), on the other hand, first option allows investor to understand desired impact of his intervention but doesn´t give him an opportunity to understand changes from the point of view of the stakeholders (and the investor may miss out the changes that are not visible at the first sight). Engagement of stakeholders helps to understand local dynamics better. Direct effects (quantitative changes captured in common statistical data) can be determined by the first option, but broader comprehension of less tangible outcomes is better to achieve by involving stakeholders into identification of outcomes. (While traditional CBAs did focus predominantly on tangible benefits – e.g. changes in economic capital such as production, revenue, infrastructure improvements; and in human capital, such as health, education results; or in environmental capital, recent CBAs involve also less tangible benefits of interventions, such as improvements in social capital; institutional capital; or broader well-being aspects: self-esteem, mental health, participation, empowerment…).

The social aspects are increasingly incorporated into CBAs, the framework for implementing «well-being» impacts into such analyses was created by the theory of «social return on investment» (SROI). Taking into consideration less tangible benefits is more difficult compared to the direct effects, as they usually don't have attributed straightforward indicators which would allow translating of these (mostly) qualitative changes into quantitative terms.

The second step in this phase of CBA is to quantify identified gross outcomes, what means to measure the change that has occurred, and to do it separately for each gross outcome. Also the qualitative change has to be expressed in quantitative way – the evaluator may attribute an indicator for this outcome and set the value on a scale (e.g. asking the stakeholders to rank the indicator on a scale 0–10 when comparing it to the situation before the intervention).

Quantitative indicators should be determined for each outcome, as outcomes have to be benchmarked. It is always recommended to explore whether there is a recognized indicator in the literature, linked to the certain outcome, even if it does not reflect the outcome perfectly (e.g. the number of additional years at school is internationally accepted proxy indicator of improved education, even though it does not respond to the quality of education perfectly). For inherently qualitative processes, a scale assessment can be applied. To collect data, the survey questionnaire may be designed in a way, so that the evolution of a change is captured in time, since beginning of the intervention. It means that indicator should be able not only to include information on the coverage (the size of sample for data collection), but also information on dynamics of the change (magnitude of

the change experienced by the respondents).

In this phase of CBA, all «gross outcomes» are identified and measured; «gross» because here we do not assess to what extent the outcome has been influenced by other factors.

2. Adjustment by counterfactual and by attribution of other actors

The evolution in outcome indicators is now able to exhibit the magnitude of changes observed since the beginning of the intervention. However, these changes may not necessarily have occurred only due to the intervention. That is why gross outcomes must be deducted by the contribution of other factors and actors, to get the net value which can be attributed solely to the tested intervention. Counterfactual is the change which would occur anyway, regardless of the tested intervention. Attribution must be identified if there are other actors who contributed to the intervention. The changes based on «business-as-usual» (counterfactual) basis and contribution of other actors should be measured, in order to quantify the size of «net effect» (net change, called also «impact» of the intervention). The impact can be also calculated as a gross outcome (gross change) minus the percentage that was attributed to counterfactual and other actors contribution. The impact of intervention is thus adjusted by other factors and other actors influence.

Counterfactual scenario (which part of the change would happen regardless the intervention) should be set for all outcomes in the analysis. This can be done by several approaches: hypothetical approach uses accessible regional or national data on the macro trend in the policy area where the intervention is being implemented; before-and-after-approach tries to uncover the ongoing trend by asking the stakeholders not only about their position at the zero time (when the intervention is going to be implemented) but also a certain period of time before it (let's say a year ago); stakeholder-based approach passes the responsibility to decide whether the change is attributed to the intervention or to other factors directly on the stakeholders; and comparative approach is built on a comparison of the change perceived by the target group with a control group (e.g. nearby community or non-targeted group within the same community). In addition to measuring counterfactual, the best way to identify the contribution of other actors is a stakeholder-based approach – stakeholders are asked to list other organizations which contributed to the observed change and to give the points according to the size of their impact.

3. Monetization of costs and net outcomes (impacts)

The comparison of costs and benefits of the intervention requires expressing both sides in the common units. So monetization of impacts is aimed towards comparability of the quantitative results, thus not only costs, but also all impacts must be expressed in common unit – in money. All impacts shall be translated into money, also these which are normally not expresses in monetary terms (e.g. improvements in services, in status of target group, in quality of life aspects, etc.) – obviously, this part of CBA may be the most tricky.

Data for CBA can be collected either from the beginning of the intervention on year-by-year basis (this is useful for monitoring ongoing change - progress, for matching baseline and evaluation data), or in a retrospective way (this applies when it was not possible to collect data from the starting point and it requires deeper involvement of the stakeholders).

4. Discounting costs and impacts.

In the last phase of CBA, the time aspect should be considered in relation to costs, as well as benefits (on year-by-year basis). It means to identify how impacts (changes in outcome net of counterfactual and attribution) are distributed across time on year-by-year basis and how all costs, which were involved in delivering the intervention, are distributed in time (with costs we mean both, financial, easily expressed in budgets, as well as non-financial, referring to the community e.g. when beneficiaries are contributing to the intervention/programme). Capturing how impacts and costs are distributed across time will give the image of cash-flow broken down by the type of benefit and type of cost. Then it is possible to calculate total benefits and total costs across time.

All costs and benefits arising into the future should be discounting

in order to get their present values. The discount rate is expressed as a percentage and can be used by Excel formula (to get NPV). Thanks to this it will be possible to identify the net present value NPV (present value of benefits minus present value of costs) and benefit-cost ratio BCR (present value of benefits divided by present value of costs). Tested intervention is rational (effective) if the net present value is higher than zero (benefits overweigh costs) and if benefit-cost ratio is >1.

Calculating NPV is important as it may say how much the future impacts of the intervention are worth to investors and stakeholders now. BCR tells how many euros/dollars etc. are generated due to intervention per 1 €/$ invested.

Additional notes to describe CBA methodology

NOTES to identification of cost and benefits

- All benefits and costs that have impact on people should be taken into account in CBA
- Benefits and costs should be defined in terms of observable consequences on people
- Only those costs and benefits directly attributable to the policy should be taken into account – if they would occur anyway, then they should be ignored
- Avoid double counting
- Consider opportunity costs
- Consider externalities
- Consider induced behaviour

Notes to enumerating in CBA

- Benefits should be measured in terms of «willingness to pay», and costs should reflect opportunity costs
- Values should be adjusted for risk
- Values should be expressed in terms of ranges
- The evaluation period should be «whole of life»
- Benefits and costs should be measured in real terms, i.e. net of inflation
- Multiplier effects should be ignored, unless there is high unemployment

Note: Wider framework for conducting a CBA

The main steps of full cost-benefit analysis process (including those described above) are as follows:

- **Step 1:** Define policy alternatives and counterfactual
- **Step 2:** Identify the people who gain and those who lose
- **Step 3:** Identify the benefits and costs; allocate to time periods
- **Step 4:** Quantify the benefits and costs within ranges
- **Step 5:** Discount to a common period, compare benefits with costs
- **Step 6:** Is the result clear enough? If not, consider whether it is worth investing in more research, and repeat above steps
- **Step 7:** Write report

Individual steps of CBA mentioned above are very well described in the guides developed by The Treasury (advising body to the New Zealand Government) initially prepared for the institutions and bodies, decision makers and their advisors using the Treasure's tool for CBA. They not only explain how to monetize impacts, but also how to define policy alternatives and counterfactual, how to allocate costs and benefits to time periods, how to identify segments of policy target cohorts, how to avoid double-counting, explain reasoning behind discounting, or what is sensitivity analysis. The guides also provide worked examples on how to proceed CBA [see: CBAx Tool User Guidance – Guide for departments and agencies using Treasury's CBAx tool for cost benefit analysis; The Treasury (2017), or Guide to Social Cost Benefit Analysis; The Treasury (2015)]. Another guide to own CBA tool at governmental level was prepared by HM Treasury (British government department) in cooperation with Public Service Transformation Network and Whitehall partners, to redesign public services to

deliver better outcomes and higher value for money (see: Supporting public service transformation: cost benefit analysis guidance for local partnership; HM Treasury, 2014). For examples of outcomes identification and data sources for monetization of impacts, in segments relative to the target groups of ENCON project («adult mental health»; «crime»; «children in care»), as defined by the HM Treasury CBA model. Priority attention is given to CBA, and especially to incorporating social aspects to CBA, in evidence-based policy decision-taking processes in UK, New Zealand, and the USA, that's why we can find variety of updated guidelines particularly from the official authorities of these countries. Of course, there are also other extensive guides (see: Handbook of Cost-Benefit Analysis 2006 by Australian Department of Finance, 2006; Guide to Cost Benefit Analysis of Investment Projects by the European Commission's DG for Regional Policy, 2008; or Cost-Benefit Analysis and the Environment: Recent developments by OECD, 2006).

Alternatives to CBA or using partial CBA

Any major investment in public services will affect many actors, not only directly (suppliers, clients in the respective sector, as well as individuals: members of the target group and also employees, citizens), but also indirectly (induced effects). Some effects are external, and it is hard to express them in prices. It is necessary to examine linkages between actors (affected directly and indirectly) and the effects, to avoid double counting of the benefits, to define who is experiencing the impact of the intervention at the end. In some cases, especially when there are many (indirect or external) effects that are difficult to monetize, it is more appropriate to use other similar evaluation method, or to use some of the partial CBA methods.

Relevant criteria for decision on the proper or most suitable methodology involve completeness, feasibility, objectivity and usability for decision making process. Each methodology has its advantages and disadvantages; the next table summarizes features (advantages and weaknesses) for the most common methodologies in relation to the mentioned criteria of methodology selection.

Table 1. Comparison of evaluation methodologies.

	Methodology features			Usability in decision process		
	Completeness	Feasibility	Objectivity	Clarity of calculations	Clear advice	Acceptability
Monetary methodologies						
Financial Analysis	– Only financial effects. Often single actor but can be extended to multiple actors.	+ Standard accounting approach.	+ Causality tested. Effects can be easily compared due to use of standard rules.	+ Process is clear due to use of standard and transparent accounting rules.	+ Ranks policies and distinction between attractive and unattractive policies.	– Limited acceptability for large project due to incompleteness.
Input-Output Analysis	+/– All actors are taken into account but only direct and some indirect effects.	– Limited: IO tables are only available for main activities (sectors).	+/– Causality tested. Objective due to use of standard IO table. But only relevant for short-run and for small projects.	– Insight in parameters from IO tables but not in calculations behind it.	+ Ranks policies and separates attractive from unattractive policies. Clear and detailed advice.	– Strong assumptions needed about state of the economy. Also not all effects are taken into account.

Table 1 (continuation). Comparison of evaluation methodologies.

	Methodology features			Usability in decision process		
	Completeness	Feasibility	Objectivity	Clarity of calculations	Clear advice	Acceptability
Monetary methodologies						
Computable General Equilibrium Analysis	+ All direct and indirect effects, and to some extent external effects, all actors included.	– Limited: based on IO tables, method requires complex calculations.	+ Causality tested. Objective due to basis of IO tables.	– Calculations form black box.	+ Ranks policies and separates attractive from unattractive policies. Clear and detailed advice.	– Limited acceptability due to complex calculations.
Cost Effectiveness Analysis / Cost Utility Analysis	+/– Only main effect & costs are counted, all actors included.	+ Limited data and calculations required.	+ Causality tested. Main effect & costs are weighted adequately.	+ Insightful calculations.	+/– Ranks policies in terms of attractiveness, no distinction between attractive and unattractive.	– Focus on one effect. Not suitable for policies with more than one relevant effect.
Social Cost Benefit Analysis	+ Some effects are hard to monetize but all effects are listed and actors are taken into account.	– Substantial calculations necessary.	+ Based in economic science. Causality tested. Also substantiated estimated parameters are used.	+/– Risk of black box effect.	+ Ranks policies & distinguishes attractive policies from unattractive ones.	– Some assumptions might be hard to accept; high weights of high-income people & business interests.
Social Return on Investment	+/– Aimed at monetizing social and environmental effects as much as possible.	– Substantial calculations necessary.	+/– Based in economic science. Causality tested. But risk of subjective parameters for intangible effects.	+/– Risk of black box effect.	+ Ranks alternatives & distinguishes attractive ones from unattractive ones.	+ High acceptability due to inclusion of stakeholders.
Non-monetary methodologies						
Impact Assessment	+ Can be applied to all effects and actors.	+ Limited data and calculations necessary.	0 Causality not always tested. No weights used.	0 No calculations made except for estimating separate effects.	– No ranking of policies and no attractiveness conclusion.	+/– Every decision maker can draw his/her own conclusions.
Multi Criteria Analysis	+ Can be applied to all effects and actors.	+/– Depends on depth of analysis.	– Causality not always tested. Subjective weights or methods can be used.	+ Process is clear, assuming the study is transparent on the weights used.	+/– Usually ranks policies but no attractiveness conclusion.	+/– Decision makers can apply their own weights.

Source: Hof, B. – Koopmans, C. – Lieshout, R. – Wokke, F. (2012).

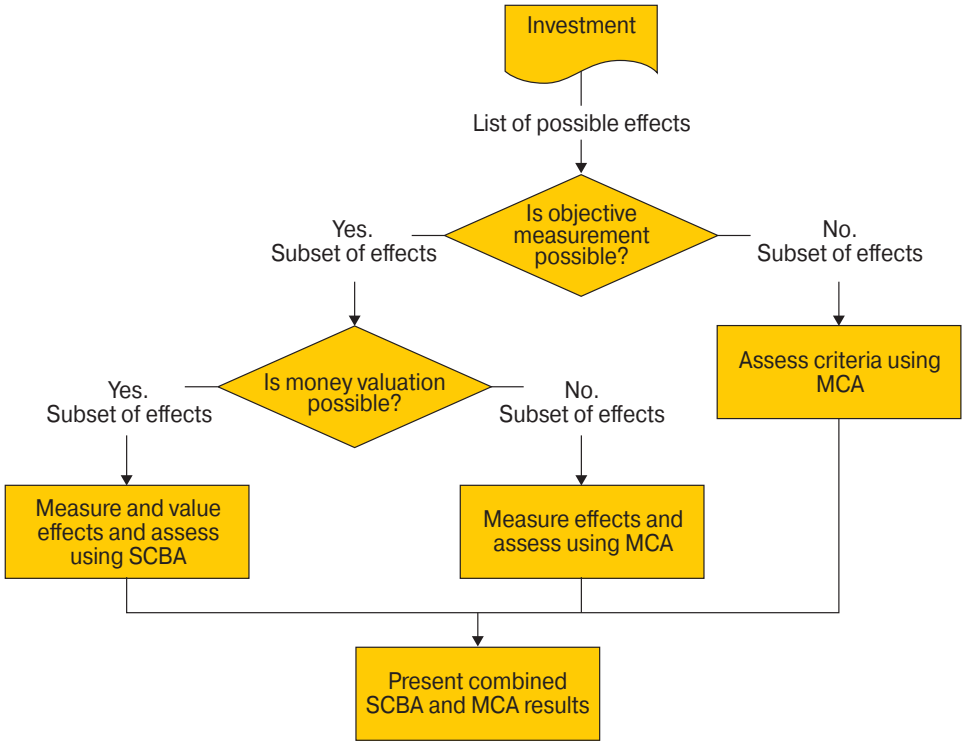
Most of the mentioned methodologies have explicitly monetary nature, and the last two are recommended to use in cases when there are too many effects that cannot be monetized with acceptable degree of uncertainty. Input-output (I–O) analysis and CGE (computable general equilibrium) model are recommended when the evaluator aims to focus at sectoral analysis/sector effects. Financial analysis limits itself to measuring only financial impacts on the organizations or individuals. Traditional Economic impact analysis (or Economic effect analysis) is not suitable for measuring the balance between costs and benefits (with aim to detect the benefits for society), as it considers some costs to be benefits. In economic rationale, if it tries to measure economic effect of the project, it will treat costs such as labour employed in the project execution (input to the project) as benefit, because it is a contribution to the local economy. This is obviously different understanding of the outcomes of the intervention, as CBA follows «net benefit» created by the project/ intervention as a desirable result. Other alternative for project evaluation not mentioned previously are Life-cycle assessment (can be useful to identify external costs which are often ignored by standard social CBA), or Cumulative effects analysis.

Besides CBA, Cost effectiveness analysis, or Cost utility analysis, may be also used to evaluate the effectiveness of the public interventions. They are appropriate particularly in cases when benefits can be quantified but not monetized (expressed in money value), or when interventions shall be ranked within a fixed budget (they allow to rank alternatives by the benefits expressed in the same unit, other than money). The advantage for our project is that they understand costs and benefits in the same way as CBA does, and also here the assumption that benefits should overweigh costs is present. These two methods can be considered as kind of «partial CBA» (The Treasury, 2015). The disadvantage is that they are not suitable for evaluation of the interventions which are over the given budget.

Another option frequently mentioned in relation to CBA-based evaluations is Multi-criteria analysis (MCA). It is being used as an alternative to CBA particularly when either some costs or some outcomes are impossible or difficult to quantify; or when qualitative assessment is required. In this case, MCA is considered to be kind of a crude CBA and it is usually chosen due to data or time limitation. The second case when MCA becomes preferred methodology is when the emphasis is given to evaluation of to what extent the intended intervention meets the pre-set objectives of decision makers. It is usually based on a method of list of success criteria, reflecting public policy goals, with the weights assigned to each criterion. The alternatives are scored by stakeholders against these criteria. The shortcomings of the methodology include more intuitive evaluation, inclination to double counting, criteria may reflect investors´ objectives rather than welfare of community or target group, business-as-usual scenario is not considered, as well as time aspect. However, it is possible to combine advantages of both, Social CBA and MCA, and to perform the analysis in two dimensions. The mechanism of combination of both methods is displayed below.

The very basic idea, or foundations of CBA, is rooted in the private financial methods of project evaluation. They also use ranking criteria such as net present value, internal rate of return, benefit-cost ratio, but in a solely financial way. Another common criterion is a payback period. Since in the most projects, the costs incurred before any benefits are delivered, it is useful to be able to estimate the point in time, when total benefits will exceed the total costs. Both, costs and benefits should be discounted. The shortcoming of this evaluation criterion is that it neglects cash flows (costs and benefits) which will occur beyond the payback period. Social CBA also uses similar-to-financial ranking criteria, but it treats costs and benefits differently, than private evaluations do. Social CBA uses social rather than private rate of discount; social CBA considers opportunity costs (shadow prices) rather than market prices. So social CBA includes social perspective, however, limitation is that it assumes that everything what decision maker/investor should consider is possible to measure

Figure 1. Combination of SCBA and MCA.



Source: Hof, B. – Koopmans, C. – Lieshout, R. – Wokke, F. (2012).

in monetary terms. However, there are some aspects important to society, directly or indirectly influenced by the project/intervention, which cannot be included in money metric. Also these «intangibles» must be assessed against money metric. For purposes of evaluations, where intangibles plays important role and it was not possible to express them in money values, the concept of «multiple accounts» was introduced. Tangibles are measured at the cost-benefit account (here it is considered to be economic efficiency account) and intangibles constitute other account (may be measured in monetary, or non-monetary units). This concept originated in the USA, in the process of designing the guidelines for publicly-funded development projects evaluation by the legislators (for details see e.g. van Kooten, 2017). Particularly MCA methodology (described above) may serve in the framework of multiply accounts – this approached is recommended when some spillovers are truly intangible and cannot be measured in monetary terms. (For deeper insight in theoretical concept and foundations of CBA, see works such as: Cost-benefit Analysis: Concepts and Practice (2006) by Anthony E. Boardman; or later edition from 2011 by Anthony E. Boardman, David H. Greenberg, and Aidan R. Vining; Cost-benefit analysis and economic theory (1975) by Jacques Lesourne; Benefit-cost analysis in theory and practice (1994) by Richard O. Zerbe and Dwight Dively; Cost-Benefit Analysis and Public Policy (2009) by David Weimer.)

Conclusion

All significant decisions which may largely affect communities or citizens, or which require substantial investments, should be based on evidence-based analyses. Most of them include some kind of costs and benefits comparison. Primarily, CBA is about organizing available

information in a logical way and allowing an investor, local authority, or NGO to consider as many aspects as possible (it measures the impact on public at large). The decision makers or advisors should be encouraged to employ at least rough CBA, or some alternative methodology, otherwise they would be left to rely on intuition or anticipations. CBA should not be rejected already at the beginning due to the argument that some outcomes are difficult to measure (what is often true). There are techniques to use estimates, or to use proxy indicators, the evaluators can take advantage of existence of variety of guidelines. After all, some information is always available. However, once the rules of a method have been chosen, the evaluator should stick to it, especially when comparing alternatives. CBA is used to reduce uncertainty in decision making.

The main purpose of CBA is that it provides **benefit-cost ratio (BCR)**, rate of **return on investment (ROI)** and **net present value (NPV)** for each intervention/programme/project. This information about value for money allows comparing various options. The outputs of the analysis which may be of the most significant importance are: lifetime net present value of the intervention; lifetime net present value of individual impacts; and return on investment to society and to government (State/local).

However, maybe the biggest problem connected with social CBA is lack of standardization in some areas, where social CBA is currently being employed. For example, while there are some standards in using CBA in space, agriculture sector, waste management, or other environment-related areas, there is insufficient standardization in using CBA to evaluate projects related to public services in childcare or support to families at risk. But still, there are many papers applying CBA to assess private or public programmes focused on child education, particularly on preventive interventions to improve schooling or health of children (mental health or cognitive and non-cognitive skills of children) published in psychology. However, general consensus is needed to develop the process of standardization, to achieve transparency and consistency in using social CBA to evaluate such programmes. Even while there is no general agreement on standards, meanwhile an agreement on basic principles may be achieved. This will also enhance the ability to educate stakeholders to conduct CBA to evaluate their own initiatives and to understand the results properly.

CBA EXPERIENCE OF PRISON AND POST-PRISON PROGRAMS

«The fundamental premise of a CBA of crime is that the resources a society deploys in preventing or coping with crime could, in the absence of crime, be used in other ways.» (Greenberg, 1990)

The essential problem of the CBA is the proper selection and quantification of costs and benefits. Evaluating costs may be easier if a researcher is familiar with all relevant costs of a planned program. Costs associated with a prison program may vary according to particular program and its needs. The proper evaluation of the benefits side is more challenging. The most appropriate benefit of the prison service is the achieving of low recidivism. Except for recidivism, other factors need to be taken into account. The evaluation is complicated as some determinants belong to both the costs and benefits. CBA also account for the opportunity cost of preventing crime. Opportunity costs of the crime are added to costs but also relate to benefits in case of low recidivism (i.e. these include costs of crime activity if the recidivism were high). We preview approaches used in the literature.

Cost evaluations of prison and post-prison programs

1. The study by Greenberg (1990), «The Cost-Benefit Analysis of Imprisonment», analyses the increasing incarcerated population in USA and argues that the current system is inefficient. Author points on the long sentences and imprisoning too many people even in cases when alternative sentence other than imprisoning would be appropriate. Author supports his arguments with several examples in the study. For instance, one billion dollar spent by national government added extra 24 000 slots in federal prison in USA during the George Bush's government but the recidivism did grow even after. The Greenberg's approach was criticized by Edwin Zeldawski in his study published by the National Institute of Justice in USA. Study by Zeldawski evaluates the reasonability of constructing of a new prison by assessing impacts on society. His main conclusion is that the prisons provides a cost/effective method in reducing crime. For his conclusions Zeldawski uses the CBA. The costs assumed in his study include:

- Construction cost 5 000 $ per person (10% interest rate is assumed)
- Annual maintenance cost 15 000 $ for a medium-security prison
- Social costs (loss of economic production, taxes and welfare payments to families of inmates) 5 000 $ / person / year

The estimated benefit related to lower recidivism and fewer crimes when policy is implemented can be problematic. According to Zedlewski one approach can be to measure:

- the cost of stolen property
- the cost of injuries at medical costs and lost income

• the loss of life as the lost earnings for a person the victim's age

2. The study «The Intergenerational Effects of Parental Incarceration" by Dobbie et al. (2018), estimates the causal effect of parental incarceration on children's medium/run outcomes in the context of the Swedish criminal justice system. The study uses the impact outcomes in data: teen criminal convictions, teen pregnancies, high school graduation, welfare receipt at age 20, and formal sector earnings and employment at age 20. The age of the inmates plays an important role in efficiency of the crime preventing programs but in the area of counting costs and benefits of the crime as well. If the penalty system is not successful enough to re-educate the young inmates there is high probability that they will continue in their criminal career after release and they will cause another costs connected with their crime activity. Total costs of the young offenders are surely higher than those who committed the crime later. Smith (2017) also highlights the importance of continuing with the programs and help to the re-offenders after they are released. In Nordic countries the supporting and rehabilitation programs for ex-offenders are an integrated part of the system.

3. The correlation between the inmate population and the costs of prison across the USA analyses the study "The Price of Prisons: Examining State Spending Trends, 2010-2015" by Mai and Subramanian (2017). According to this study the highest costs are estimated for health care costs, state-wide policies to increase public employee salaries and benefits. Also policy changes that affect sentencing and therefore the size of the prison population. Most of these factors cannot be controlled by the prison office. Study concludes that costs of prison are connected also to the size of prison population and authors propose the introduction of alternative sanctions that could be more effective for the state and society. The costs effectiveness of prison service and programs can be evaluated by recidivism rate.

4. Adding the psychic cost to the CBA is problematic. The crime prevention by spending money to prevent crime must by only so long as the marginal cost of preventing a crime is smaller than the marginal cost of the crime prevented. Other benefits could be counted as the positive contribution for society if the released person gets a job such as contribution to GDP over the life expectancy and tax payments. These factors are potentially relevant but it may be challenging to quantify those costs. Decision to include these items depends on the researcher and the purpose of CBA.

5. The relevancy of factors included in the CBA depends on the authority that performs the analysis. The role of researcher is to propose an optimal approach to quantify those costs depending on the required amount of details and accuracy. One approach is to focus on costs specific to a particular area of crime. There are different types of costs associated with the criminal activity of thieves, dealers, murderers, etc. For instance when statistics related to tracking the costs of criminality according particular area are available these could be included. In that case the CBA will provide good overview of how expensive are the programs for each crime area comparing to the benefits which can be obtained by the reduction of the recidivism in that particular crime area. This approach is more challenging but also more accurate. The second approach employs general data with no diversification according to the crime area. The general data could be observed by particular prison, by the research of the particular environment or data at country or international level. This type of analysis gives less accurate outcomes but can be easier to execute.

6. The inclusion of material losses in CBA is not satisfactory. Studies show that it costs more to prevent the crime than to compensate victims. This observation opens a way to compare the costs and benefits of crime activities. Obviously the society would be willing to pay to prevent crime but also the psychical costs arising from crime activity. Greenberg (1990, p.65) concludes *«cost and benefit analysis could be inconclusive because they will not be able to produce reasonable estimated of costs and benefits, or will not be able to cope with interpersonal*

comparisons of costs and benefits. When a policy cannot be justified, we (social scientists) should say so». The calculation of costs related to crime prevention may suffer from fiscal illusion (according to Buchanan, 1967) – the provision of public goods is biased toward overspending of public money. Fiscal illusion which is connected with feelings that the penitentiary and crime preventing is cheap or the gap between money allocating and money spending could make this topic even more expensive. It is also discussed whether the private sector can be more effective in providing crime prevention activities.

7. There are other factors potentially relevant which could be considered:

- The number of offenders committing a crime but not imprisoned (this indicator can be included in the measurement of the stolen property cost)
- The cost of attorneys, prosecutors, judges, court reporters
- The cost of the stolen things,
- The benefits of low income community from using of cheap stolen goods.

In Tables 1 and 2 we present a broad but concise preview of costs related to prison programs and integration programs of ex-offenders. Information is collected from literature on CBA.

Table 1. Description of costs related to prison programs.

Program	Cost	Specification
A: Prison labor – industry employment (outside prison)	C1: Guards	Time and salary of the guards. The costs, which are connected with the transportation of the inmates outside of prison.
	C2: Training	Working time of the outside employee who is responsible for the training of the inmates.
	C3: Tools	All tools and materials which are necessary for the job.
	C4: Constructing the capacities	In case that the capacity must be built.
	C5: Contracting and dealing with private or public companies	The capacity of program manager who is responsible for the contracting the cooperation.
	C6: Quality controlling	Working time of the controller who is responsible for the product quality control.
	C7: Administration costs	Accountant, personnel, supervisor
	C8: Transporting cost	Ticket for public transport or the cost of the bus operation.
	C9: Healthcare	It depends on the healthcare system.
	C10: Others	
B: Prison jobs inside of the prison	C1: Quality controlling	Working time of the controller who is responsible for the product quality control.
	C2: Training	Working time of the outside employee who is responsible for the training of the inmates.
	C3: Administration cost	Accountant, personnel, supervisor
	C4: Healthcare	It depends on the healthcare system.
	C5: Others	

Source: Prepared by authors.

Table 1 (continuation). Description of costs related to prison programs.

Program	Cost	Specification
D: Education programs	C1: Teachers	Working time of the teachers, assistants, etc. who are responsible for the education.
	C2: Materials and office equipment	All necessary school equipment.
	C3: Library or another source of information	Books, journals, articles or internet access and its security.
	C4: Administration cost	Accountant, personnel, supervisor
	C5: Classroom	Cost connected with the classroom equipment, computers, etc.
	C6: Healthcare	It depends on the healthcare system.
	C7: Others	

Source: Prepared by authors.

Table 2: Description of costs related to integration programs for ex-offenders.

Program	Cost	Specification
E1: Costs connected with the job	C1: Monthly earnings	If persons are fully employed by the prison.
	C2: Contribution to the earnings	If persons are employed by private company and have the contract with the prison about co-financing.
	C3: Healthcare and social security insurance	According to healthcare plan.
	C4: Tools and materials	Depends on the contracted participation between private and public.
	C5: Protective equipment	Cost of health and social insurance according to local rules.
	C6: Others	
E2: Training costs	C1: Teachers or assistants	Monthly earnings of the assistant or teachers who will be responsible for training of the ex-offenders and will also control the quality of their work.
	C2: Monthly earnings of the ex-offenders during the training	If the persons are fully employed by the prison
	C3: Contribution to the earnings during the training.	If persons are employed by private company and have the contract with the prison about co-financing.
	C4: Healthcare and social security insurance	Cost of health and social insurance according to local rules.
	C5: Tools and materials	All tools and materials which are necessary for the job.
	C6: Others	

Source: Prepared by authors.

Table 2 (continuation): Description of costs related to integration programs for ex-offenders.

Program	Cost	Specification
E3: Administrative costs	C1: Monthly earnings of the administrative support workers.	
	C2: Materials and office equipment	
	C3: Others	
E4: Cost of basic needs for the ex-offenders	C1: Food	If not available use pocket money, vouchers or the full restaurant service.
	C2: Housing	If not available use housing allowance, dormitory.
	C3: Clothes	If not available use pocket money, vouchers or laundry service.
	C4: Others	

Source: Prepared by authors.

Some of these costs are fixed costs while others have to be evaluated on the monthly basis. We can then obtain the total sum of the costs that we consider appropriate for the CBA. As Greenberg (1990) shows, another factor that should be considered is the status and characteristics of inmates. A study of federal sentencing in San Francisco found that probationers differ from those sent to prison in many ways: educational attainment, marital status, stability of residence and employment, dishonorable discharge from military status, pre-arrest income, participation in church activities and length of prior criminal record. These findings were confirmed also by other studies based on experiences from different countries. The Greenberg's study raises a question whether decision made by inmates is not a kind of selection of those persons who have higher ability to avoid of crime commitment after their release. The inmates also calculate their strategies and usually have many different reasons and intentions. Similar approach is considered in the study «Prison Programming and Recidivism as a Method of Social Bond Theory: A Meta-Analysis of Research from 2000–2015» by Madalyn Smith. The social status could be a correction factor in the CBA.

Calculations of benefits of prison and post-prison programs

The main benefit of the prison programs is the reduction of recidivism. There are many difficulties connected with this measurement. Approaches to measure the benefits of prison programs differ between countries. The benefits are evaluated based on lower rates of re-arrest, re-incarceration or re-conviction. The type of crime may influence the recidivism rate. Some countries count the recidivism rate only if the person commits the same type of crime. Also, the length of time period for tracking the recidivism may vary between countries. Most often a five years period is assumed, but some studies take a one year period to evaluate the recidivism rates.

1. The significant contribution to evaluation of the benefit side of the CBA brings the study «Prison's: Dilemma: Do Education and Jobs Programs Affect Recidivism?» by Norman H. Sedgley, Charles E. Scott, Nancy A. Williams and Frederic W. Derrick. This study focuses on the efficiency of the three types of prison activity:

- Prison labor – industry employment
- Prison jobs inside of the prison – institutional support employment such as laundry, kitchen, etc.
- Educational programs.

The efficiency was measured by the recidivism rate. The study works also with the control group of person who was not participated in any of those activities. The hazard model was used for the study. It was taken place in Ohio prison and analyses the data for the period of ten years (1992–2002) and covers 4515 male inmates.

2. The Influence of Social Bond Theory on Recidivism

In an attempt to explain criminal offending, Travis Hirschi (1969) proposed a theory that examined the connection between strong bonds and the likelihood to deviate. According to Hirschi, «elements of social bonding include attachment to families, commitment to social norms and institutions (school, employment), involvement in activities, and the belief that these things are important». Strong social attachments make individuals less likely to violate the norms of society. Table 3 summarizes examples of prison programs related to four elements of Social Bond Theory. We then report results from experiments testing the influence of Social Bonds Theory on recidivism rate.

Table 3. Examples of prison programs related to four elements of Social Bond Theory.

Category	Characteristics	Examples of prison programs
Attachment	Relationship building, Connection to important individuals	Prison Nurseries, Daddy Skills Programs
Commitment	Investment in education, Investment in career advancement	Post-Secondary Education, GED programs, Vocational training, Career licensure
Involvement	Extended time periods in program, Time in personal improvement	Animal training, Gardening programs
Belief	Focus on moral beliefs, Acceptance of societal norms	Religious programs, Therapeutic groups, Drug rehabilitation

Source: Adapted from Smith (2017).

Social Bond Theory consists of four elements: attachment, commitment, involvement, and belief. These elements are frequently found in prison programs and can classify these programs into separate categories to compare the program success. The basic idea is to compare the effectiveness of the mentioned group of programs at the whole prison population or at the particular crime areas as discusses above. First the program is introduced and then outcomes are measured. The outcome is the observed difference in outcomes between two groups of ex-offenders – those who joined the program and the control group. The authority decides the time period to evaluate the recidivism rate of ex-offenders.

The application of Social Bond Theory to prison programs:

Attachment (or personal networks) is considered the most important social bond. The formation of attachments with other human beings can stand in the way of deviant behavior. A securely attached individual is more likely to understand the concept of respect. The programs promote a stronger relationship with the people in their lives, such as bonds between parents and their children. In the group of women ex-offenders the strengthened attachment to the child led to 14% recidivism. The recidivism rate 27% was observed in the group of men participating in the Daddy Skills Program and 45% in the group attending the book program.

The average recidivism rate attained 80%. The programs, focused on another types of attachment, also reduced the risk of repeated crime but the effect was smaller as the one generated from the attachment between parents and their children. The size of other effects obtained from programs: clergy 24%, parents in-law 21%, sibling 10%, other relative 9% and a friend 7%.

Greenberg (1990) explains that incarcerating can make persons to commit more crimes because of stigmatizing and weakening ties of the inmates to their family members, community members etc. Crime career may be supported by an affiliation with other criminals, generating feelings of bitterness toward the law or respect for the ability to commit a crime from other criminals.

Commitment to a social group or organization fosters a sense of social responsibility as well as duty and honor. These programs take the form of post-secondary education, vocational skills training (or university study). The offenders invest time and effort into a conventional achievement that will be beneficial to them in normal society. Several studies evaluate the impact of the educational programs on the recidivism rate. Brooks (2015) investigate the recidivism in relation to earning an Associate's (13,7%), Bachelor's (5,6%) and Master's degree (0,0%).

According to investigation of Duwe (2015) the work release programs reduced the recidivism by 16% – rearrested, 14% – reconviction, 17% – new crime reincarnation. Duwe also analyzed the probability of getting job after being released. Participation with the work release program created an eight times greater likelihood to receive a job. The study of Wilson, Gallagher and MacKenzie (2000) compiled a meta-analysis covering programs that involve education, vocational training and work programs. According to their analysis, the average recidivism rate for offenders not involved in any program is 50% and falls to 39% in the group of offenders who participated in program. All these studies were applied in the condition of USA.

Involvement decreases boredom and feelings of detachment. This type of program is used worldwide. The central idea is that inmates must dedicate their free time to a particular activity. Activities involve rescuing cats or dogs, sports, gardening, etc. The program with wild horses in Colorado decreased the recidivism rate from 75% to 45%. Other program involving inmates working with the animals also generate positive results. Similar programs are popular in Norway, but we are not aware of any research evaluating these programs.

Belief. People with strong religious beliefs and affiliations have a stronger sense that their life holds unique purpose. These programs are used for drug or sex offenders and include cooperation with clergy and psychologists.

Box 1. Norway prison.

«Better out than in» is an unofficial motto of the Norwegian Correctional Service.

Small prisons, no overcrowding (61 prisons for a country of 5 million people), average of 70 cells per prison (largest 392, smallest 13). All prisons offer education, mental health and training programs. If not enrolled, inmates work – mostly within the prison. Most prisons are «open prisons» in which prisoners are housed in low-security surroundings and allowed frequent visits to families while electronically monitored. Average sentence length of 8 months; 90% less than 1 year, repeat offenders are punished more harshly for subsequent offenses. Criminal record does not appear on job application (except for certain jobs). Government support upon release: Programs for work training, job search and social support.

According to Norwegian law, cases are randomly assigned to judges. Bhuller and his co-authors use the fact that some judges are systematically more stringent than others in the research study. In the analysis authors use the judge stringency instrument to show that Norwegian prison system is successful in discouraging crime and encouraging employment. Specifically individuals sent to prison reduce the likelihood of reoffending from 90 to 50% within 5 years, are more likely to be employed by 30 percentage points after 2 years and 40 percentage points after 5 years. There is positive impact on higher earnings and workers are 34% more likely to attend job training programs after release. The changes in the behavior are largest for individuals who were not working prior to incarceration.

Source: Bhuller, M., Dahl, G. B., Løken, K. V., & Mogstad, M. (2016). Incarceration, recidivism and employment (No. w22648). National Bureau of Economic Research.

CASE-STUDY OF EX-INMATES EMPLOYMENT ENHANCEMENT SERVICES EVALUATION IN BELARUS

In this part of the report we provide a short overview of the research made by ENCON expert team in order to calculate net effect of the particular social services of employment enhancement towards released prisoners in Belarus using cost-and-benefit analysis. In Belarus, 10 to 15 thousand prisoners are released each year, which is equivalent to the population of a small Belarusian town. Half of them apply for help with employment to State Employment Assistance Program (SEAP). About 40% attempt to find employment on their own or remain unemployed, up to 10% of those released are pensioners and people with disabilities who are unable to work.

Employment of former prisoners in Belarus

Employment of a person released from prison is one of criteria for effectiveness of penal system, since labor unemployment is one of the main causes of recidivism. According to the statistics of the Ministry of Internal Affairs of Belarus, in 2017 36.3% of crimes were committed by those with a criminal record, and 60.6% of those who committed the crime did not work or study anywhere.

In Belarus at the national level the employment the State Employment Assistance Program (SEAP) dominantly provides services for former prisoners. After release, a person has to sign up for SAEP free services. The SAEP results indicate that only 25% of total number of released from prisons are employed on a local labor market. Also, there is a high risk that most of the employed

will lose their jobs during the first year of employment, which leads to higher unemployment rates and recidivism.

The key issue of the existing state program is that a person released from prison must personally apply to state bodies to sign up for help. Lack of awareness, low motivation and weak social ties of ex-inmates often hamper this. In 2017, every second person released for various reasons ignored the state's assistance in the matter of his employment. It should also be noted that in Belarus there is no single intersectoral program for the rehabilitation of ex-convicts.

In Belarus there are also non-state initiatives aimed at employment enhancement of former convicts. One of them is reintegration camps/programs at the Orthodox Church sites. In total, there are about 10 such sites for those released from Belarusian prison. To conduct cost-and-benefit analysis of the employment enhancement services provided to ex-inmates, the expert group chose the reintegration site in the village of Chonki, Homel region, south-east of Belarus. The time interval of 3 years was defined, i.e. from September 2014 to October 2017. The duration of re-integration program averaged to 3-4 months for each participant. As an investment, two greenhouses were purchased and installed on the church's yard. Participants of the program were trained in the basics of growing vegetables and flowers in greenhouses and in the open air. The key outcomes of the program for the specified period are:

I) 30 people from the prisons in Homel and the Homel region took part in the program (random selection criteria were used, however selection bias was present to certain extent);

II) 18 people (60%) were employed for permanent employment, while each employed worked for over one year;

III) 1 person (3%) was sentenced to imprisonment by court decision for a serious crime (killing a person);

IV) 1 person (3%) was detained in the prison for the period of investigation of a crime;

V) Almost half of the participants created new families.

Cost-and-Benefit Analysis

The first stage of the analysis was to identify the effectiveness of the church's program. In order to determine whether it had a positive effect, a comparison was made with the existing state employment enhancement system, when a former prisoner should voluntarily apply for the State Employment Assistance Program (SEAP). The comparative analysis of four key performance indicators led to the conclusion that the church's reintegration site is more effective due to:

1) More of those released from prison are employed at a permanent job (60% vs. 25% in case of SEAP),

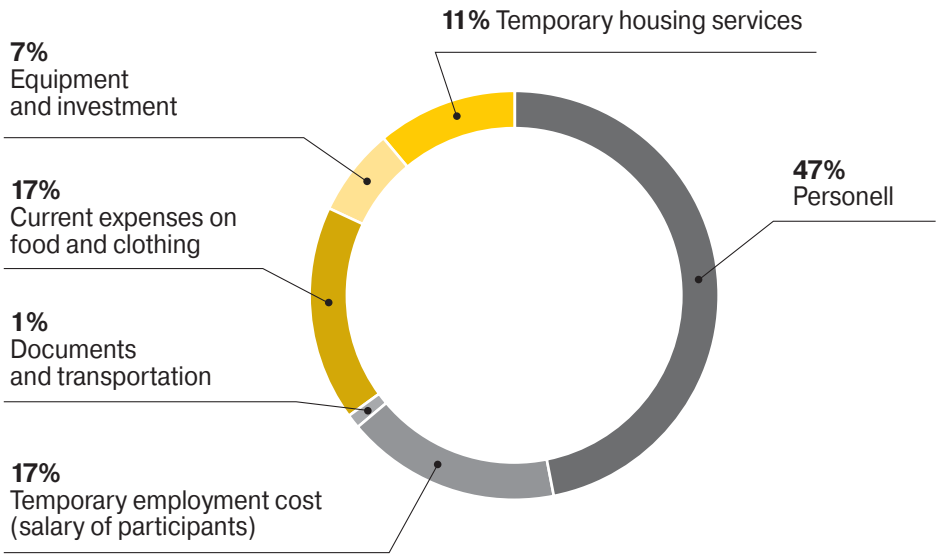
2) Longer period of retaining a job (all of those who were employed after church's program kept the job for more than 1 year vs. less than 25% in case of SEAP);

3) Lower recidivism rate (7% vs. 36% in case of SEAP);

4) Lower share of unsuccessful cases, i.e. those ex-inmates who went through the program but did not find employment after assistance (26% vs. 32% after SEAP).

The second stage was to determine the cost of the program. After careful studying of the program financial details, the total cost of the church's employment assistance program for ex-inmates for three years was equal to USD 68 942 or USD 1 915 per month. The cost of the program per participant was USD 2 298, and per each employed – USD 3 830.

Diagram 1. Cost structure of church's employment assistance program in Chonki village, Homel region



Source: authors' calculation

Finally, the socio-economic benefits of the program were identified. Benefit analysis included two main quantitive components: a) an increase in the number of people employed in the economy, and b) a reduction of the cost of keeping relapsed criminals in prison. Those benefits can also be considered as a potential loss of society from incomplete employment of former prisoners and the retention of recidivists in prison, respectively.

The long-term nature of employment impact of a person with a criminal record on the economy is considered as his/her future productivity after he/she is employed. Productivity is estimated as contribution of labor to annual GDP per employee (USD 5,1 thousand as of 2016). Assuming that the average age of a released person was 35 years (as of 2014), after release he/she could have worked 25 years before retirement on average if the rehabilitation program was successful. Based on this data, the net present contribution to GDP from one former convict during 25 years period would be USD 94.7 thousand (4% discount rate implied). The effectiveness of the program is 10 people, which comes from the assumption that without the church's employment support, fewer released would benefit from the help of the state employment assistance program (8 people out of 30, or 25% as national average). The productivity benefit from the increase in the number of employed in the economy is equal to USD 947 thousand.

Also, it can be argued that 9 people avoided commitment of a recidivist offense (or 29% when comparing recidivism rate of the church's program with the national average). Assuming that the average sentence term in Belarus is not less than 6 years (estimates for 2017), and taking into account that the maintenance of one prisoner in prison cost the state 187,7 rubles / month (as of 2016), estimated cost of maintaining one criminal for 6 years will be on average USD 7 027 in equivalent (at 4% discount rate). The church's employment assistance program thus made it possible to save as much as USD 63,2 thousand in net present value.

Other benefits, impossible to measure due to absence of data, include: damage reduction to society as a result of lower recidivism rate (damage to property, health, etc.); better

treatment of drug or alcohol abuse of ex-inmates at the church's program; lower share of unsuccessful cases; more marriages and birth of children.

In total, the present value of the benefits is USD 56 126.

Accordingly, the benefit-cost ratio is 14,7, and the total net effect of the program for 3 years was equal to USD 941 324. The payback period of the program is 1.7 years.

Conclusion and recommendations

The existing system of employment assistance for former prisoners in Belarus through State Employment Assistance Program (SEAP) is voluntary and has wide regional coverage. Providing a will of an ex-inmate, he/she can find a job via SEAP. However, the experience of the employment enhancement sites by the Orhodox Church in Belarus as well as world experience indicate that in addition to the existing SAEP system the society will be able to save more and reduce recidivism rate if investing in specialized employment assistance sites provided to ex-inmates. Such sites could be opened in Belarusian regions with the highest concentration of prisons, and non-profit organizations could be service-providers to former prisoners using proper budgetary mechanism.

Recommendation 1.

Employment of former prisoners should be considered as an important indicator of the effectiveness of their re-integration process into society. Employment of ex-inmates should be tracked at the regional level and the country as a whole. For Belarus, a system of statistical information tracking jobs obtained and job retention period should be developed for evaluating the effectiveness of the employment enhancement services provided by state and non-profit units.

Recommendation 2.

There is a need for drafting in Belarus an intersectoral program of former prisoners employment enhancement identifyting the role of both the state and non-profit organizations service providers. Such program should set clear targets for its effectiveness and evaluation. Greater involvement of the non-profit sector for provision of employment assistance services to former prisoners could be done via social tender mechanism currently existing in Belarus.

LITERATURE

Brooks, Steven. Post-secondary correctional education and recidivism in Texas. Diss. University of Phoenix, 2015.

Buchanan J.M.: The Public Finance in Democratic Process (Collected works of James M. Buchanan, volume 4), University of North Carolina Press, 1967, online – 22 January 2018, available here: http://files.libertyfund.org/files/1073/0102.04_LFeBk.pdf

Dobbie Will, Grönqvist Hans, Nikanami Susan, Palme Marten, Priks Mikael: The intergenerational effects of parental incarceration, NBER Working Papers Series, 2018, online – 22 January 2018, available here:

Duwe Grant: The Benefits of Keeping Idle Hands Busy (An Outcome Evaluation of a Prisoner Reentry Employment Program), Crime & Delinquency, Vol 61, Issue 4, 2015, 559-586

Greenberg, David F.: Social Justice – The Cost-Benefit Analysis of Imprisonment, Social Justice, Vol. 17, No.4(42), Ideology and Penal Reform in the 1990s (Winter 1990)

Hirschi, Travis. 1969. Causes of Delinquency. Berkeley: University of California Press.

Mai Chris and Subramanian Ram: The Price of Prisons: Examining State Spending Trends, 2010-2015, Vera Institute of Justice 2017, online – 22 January 2018, available here:

Smith, Madalyn: Prison Programming and Recidivism as a Method of Social Bond Theory: A Meta-Analysis of Research from 2000-2015. Western Kentucky University Top SCHOLAR 2017, Honors College Capstone Experience/Thesis Project, Paper 707, online – 22 January 2018, available here: http://digitalcommons.wku.edu/stu_hon_theses/707

Wilson, David B., Catherine A. Gallagher, and Doris L. MacKenzie. «A meta-analysis of corrections-based education, vocation, and work programs for adult offenders.» Journal of Research in Crime and Delinquency 37.4 (2000): 347-368.

Zedlewski, Edwin W. «When Have We Punished Enough?» Public Administration Review, vol. 45, 1985, pp. 771–779. JSTOR, JSTOR, www.jstor.org/stable/3135035.

THEORETICAL WORKS ON CBA

Boardman, A. E. (2006): Cost-benefit Analysis: Concepts and Practice. Pearson/Prentice Hall, 2006, ISBN 0131435833, 560 p.

Boardman, A. E. – Greenberg, D. H. –Vining A. R. (2011). Cost-benefit Analysis: Concepts and Practice. Prentice Hall, 2011, ISBN 0132311488, 541 p.

Lesourne, J. (1975). Cost-benefit analysis and economic theory. North-Holland Pub. Co., 1975, 521 p.

Weimer D. (2009). Cost-Benefit Analysis and Public Policy. John Wiley & Sons, 2009, ISBN 1444307185, 472 p.

Zerbe, R. O. –Dively D. (1994). Benefit-cost analysis in theory and practice. The University of Michigan, HarperCollins College Publishers, 1994, ISBN 0673180662, 557 p.