Sustainable Value as a Tool for Corporate Performance Management within New Public Management Framework

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Abstract: - This paper deals with implementation of Sustainable Value approach into Corporate Performance Management within New Public Management framework and its use in public administration environment. Nowadays, public organizations are looking for ways to become more efficient and, in some respect, to gain a competitive advantage but also put the emphasis on sustainable development. The concept of use selected management methods of private sector and their use in public administration is called New Public Management. It has not clearly defined boundaries and it is still open to new possibilities and tools. Due to increasing pressure on organizations, no matter if private or public, on compliance with the principles of sustainable development, authors define crucial economic, environmental and social indicators which should be included in overall performance evaluation of public administration environment. In general implementing sustainable development principles into organizational performance management should bring wide range of effects, for example contribution to cost savings, better efficiency of processes, or strengthen relationship within the community and customer loyalty. In practical terms, the aim of this paper is to introduce Sustainable Value as a proper tool for Corporate Performance Management, which seems to be suitable, within New Public Management framework, for use by regional governments to measure and evaluate performance.

Key-Words: Corporate Performance Management, New Public Management, indicators, public sector, private sector, Sustainable Value

1 Introduction
Public administration always needed to respond to new challenges. The proof is in transition from traditional public administration to New Public Management (NPM), which is still developing and also in the search for entirely new approaches to manage public administration. In the concept of NPM is public administration taking principles of private sector especially in the field of management. Public administration thus becomes, provider, guarantor and in some ways manager of public services. Researchers dealing with public administration describe direct connection between management style of public administration and the economy. "New Public Management (NPM) is related to the changing balance of power between economic theories since 1980." [27] This sentence is referring to the period of M. Thatcher, where in addition to administrative reforms there was a change in economic thinking in Great Britain. Until then dominant Keynesian school was replaced by neo-liberalism. In this context NPM can be seen as an alternative to continental bureaucratic way of public management in response to changes in the economic paradigm. This alternative is based on different principles than it is common in classic continental model which is represented by strict personal and organizational hierarchies closely connected with standards and regulations. In case of NPM the emphasis is placed on possibility of enforcement of individualism and personal responsibility, planning, improve services, focusing on outputs, power, control, transparency and defining strategic objectives. There is no reason why in the field of performance management of public administration could not be used principles of Corporate Performance Management (CPM), a performance management across whole organization. CPM is also known as Enterprise Performance Management or Business Performance Management. No matter how we call it, it is a set of management and analytic processes that helps the management of organization to achieve goals and visions and approve the performance. CPM tools enable to define such strategic goals and monitor and manage performance. Key performance indicators in private sector are mostly economically
oriented. In recent years, it is increasingly emphasized approaches emphasizing the importance of basic democratic and human values, whose representatives should be given especially to public administration. Some scholars even talk about the fact that there is emerging new approach that considers democratic and public values as a priority. “The new approach highlights four important stances that together represent a response to current challenges and old shortcomings. These include an emphasis on public value and public values, a recognition that government has a special role as a guarantor of public values, a belief in the importance of public management broadly conceived and of service to and for the public, and a heightened emphasis on citizenship and democratic and collaborative governance.” [4] But we think that concept of New Public Management still has lot to offer and therefore we present the possibility of extending NPM, with emphasis on the above-mentioned values.

The aim of this paper is to present new possibilities of using Sustainable Value (SV) approach as a tool for CPM in public administration environment within NPM framework and propose selected modifications resulting from its specifics. Theoretical part describes basic features of private and public sector, as essential foundations for introducing NPM and CPM specifics. Subsequently will be described basic performance indicators of region and it will be proposed necessary modifications and extensions for use in public administration environment. In practical part it will be used SV methodology and proposed indicators will be filled with data for one of the Czech regions. Indicators will be performed by calculations according to SV methodology and on the basis of outcome value the performance of the region will be expressed in monetary units.

2 Basic Features of Public and Private Sector
Public sector is being ruled by public administration. This article deals with the application of SV in context of performance management at the regional authority level. Because we will further discuss the use of some tools of private sector in the public sector, it is necessary to describe basic features of both sectors. First difference can be easily found in the determinations of objectives which each sector follows. Public sector is managed by public authorities whose goal is public interest and producing quality public services. On the other hand, private sector is mainly driven by maximization of profit or other alternative mostly economic goals. Therefore, profit is suitable indicator for the performance and efficiency measurement. Public administration in the Czech Republic belongs to continental system and it is closely connected with law, which defines the scope and character of administrative activities. It makes public administration rigid for example in implementation of modern performance management methods and creates less creative and flexible environment. In this context, it is also necessary to specify basic restrictions that may application of modern methods into Czech public administration environment make complicated. First, on one hand, after implementation of new methods into public administration, effectiveness of the implemented method is often reflected in reducing costs, streamlining operations and improvement of producing of public goods and services. On the other hand, application of new methods is often connected with high financial costs and it can be reason of reluctance to apply new approaches. Second, unwillingness of workers to learn new practices can have significant influence and cause failure of implementation process at all. Having regard to these critical points, an implementation of new methods and tools of private sector cannot be fully over taken in public sector.

2.1 Implementing of New Public Management
Implementing of NPM to public administration structures is dependent on number of specifics. Example can be the stability of administration system and the level of centralization / decentralization. Among important factors also include historical background, system of management, control and ethical level of society. Even though NPM brings into public administration many positive aspects, it is worth mentioning some obstacles. In addition to the above-mentioned problems related to implementing new approaches to public administration in general, concrete obstacle in case of NPM may be the stereotype, which is part of Czech public organizations. If it fails to create atmosphere positively inclined to changes, NPM reforms could become only costly experiment. It is therefore important to question if public servants are ready and willing to accept the transition from hierarchical model to model that is more open and gives greater opportunity to express individual preferences and abilities. Not everybody is comfortable with open, creative and competitive
climate. In the nineties it was conducted research to respond to as it is (and will) NPM accepted in various European countries. It has established seven characteristics (e.g. public expenditures as a percentage of GDP, GDP per capita, the percentage of Catholics in the population, etc.) on the basis of which it was found that NPM most affects governance in the UK, Germany, Finland and Belgium were less open to the concept of NPM. As the least willing to adopt new management approaches have proven to southern European countries such as Italy or Spain. [28]

In NPM concept citizen represents customer buying public services. Public administration becomes a market oriented system. “As public agencies become embroiled in these internal and external market processes, they must develop strategies and behaviors that allow them to succeed.” [26]

Emphasis is on quality of services and satisfaction of customer needs, whose production is dependent on the performance of organization. With provision of quality services is closely related the question of amount of involved costs. The second major goal can therefore be monitoring and determining optimal cost together with delegating responsibility for services and related finance. With the above two objectives there are connected specific actions. Typical is the effort of creating a competitive environment, delegation of authority, decentralization of agenda, creation the system of rewards and other motivational tools or cooperation with the private sector. In general, these are particular areas: financial area, organizational and competence area, human resources, cooperation between private and public sector.

2.1 Existing Areas of Corporate Performance Management

Growth, market share, profitability and value creation are the most pursued goals by most of the companies. [8] However, an organization should focus on needs and expectations of the stakeholders including managers and employees, customers, suppliers, investors, and also public at large. [22] All the stakeholders should be involved in corporate measurement system. Traditional performance measurement systems oriented mainly towards financial targets are nowadays also supported by non-financial targets which play an important role. In some organizations a move to comparative rather than fixed targets can be seen. [3] For the purpose of gaining its set of goals, each organization collects specific and diverse data as an input for business intelligence software, which is a necessary tool and facilitator in the whole process of simulating and evaluating performance. Provided outputs can be budgets, plans, forecasts or other outputs. Within all the stages of corporate management system CPM operates mainly with economically oriented indicators. On the other hand, as Bourne [3] claims “the past obsession with pure financial performance is decreasing and there may be a recognition that there is a trade off between hitting today’s financial results and sustaining the capabilities and competences that allow companies to compete effectively in the future.” As can be seen, key financial performance indicators still sustain as predominant and are defined as following: [8] economic profit, comprehensive income, return on invested capital, economic value added, return on equity, market value added. Non-financial indicators are different for each industry branch, for example: number of patents, number of new products introduced, new product success rate, number of complaints (customer satisfaction).

2.1.2 Common Areas for Public and Private Sectors within the Corporate Performance Management

Public administration currently uses management tools such as SWOT analysis, benchmarking, brainstorming and more with the fact that their practical applications are adapted to the specifics of public administration. At the same time, emphasis is placed on the computerization of public administration associated with the use of new technologies. It can be concluded that the area NPM is wide, and we are focusing on performance. Therefore, it was chosen CPM, which focuses its attention on performance. We also want to emphasize the importance of universal democratic values and therefore we suggest extending CPM on the possibility of using SV. Currently CPM is activity of organizations from private sector which manage their costs and increase their growth. The same objective should be according to concept of NPM also in public administration. However, it is important to identify the key areas in which the public administration could use CPM tools or possibly identify new ones. Public administration should be a guarantee of universal and long-term values. These values can be in addition to the emphasis on the principles of democracy and ethics also include the concept of sustainable development, and also because it has become a priority of policies at all levels. Štětinská [23] concludes that sustainable development evidently penetrates both
the management of public administration and corporate practice.

In practice, many organizations still focus mainly on profit. On the other hand, more companies realize that in globalized world it is more difficult to search for new opportunities. To increase competitiveness, both business entities and public organizations realize that output should not be the only objective, but the important thing is to produce outcomes with regard to community and the environment. Therefore, organization should constantly seek for equilibrium (to reduce risks and increase benefits) with respect to interactions within its external environment. [15] To support and measure organizational responsibility it is a crucial to include key performance indicators that consist of economic and financial data, but also environmental and social performance data of the entity. More organizations identified the gap in the market and implement sustainable development principles into their strategies and everyday routines, because benefits following from responsible behavior are significant. For example, it can improve organization reputation, brand value. It can increase shareholder value or cost savings due to environmental measures. Also sales increase or strengthen of customer loyalty because there is growing number of people who prioritize environmentally friendly product and services.

Following three fundamental pillars should be reflected in management and decision making process in private but also in public sector: [12] 

**Profit**
Economic performance, investment policies, management and employees rewarding system, taxes and state aid are included in this pillar. Also need of rejection of corruption and transparency is emphasized.

**People**
This principle emphasizes the need of philanthropy and respect of human rights. Then good health and working conditions, training and professional growth, safety of consumers or impact on local community.

**Planet**
It can be characterized by increased emphasis on material, water and energy consumption, waste, emissions noise and biodiversity.

Decision makers should reach for equilibrium between economic, social and environmental concerns. [15] It is necessary to mention that it can lead to decisional problem when decision makers face various options from various areas and must consider all potential consequences. Environmental legislation creates continual pressure on finding new solutions that are both economically advantageous and environmentally friendly. [2]

### 3 Extension of Economic Indicators by Sustainable Development Indicators

As was mentioned above, in case of private sector, there is a wider space and will for implementation sustainable development framework into managerial practice. For decades, many authors have been analyzing and recognizing public maladministration in public administration which may stand in the way of successful implementation of sustainable principles into management of public administration. This maladministration can be defined as resistance to changes, rigid adherence to rules, reluctance to delegate authority, indifference to the standards of efficiency, lack of coordination. [5] William Robson [21] criticizes “... a mania for regulations and formal procedure” in public sector. Despite the new approaches that have appeared, this strong trend for regulation of internal processes may still persist.

Based on literature research and analysis of possibilities and gaps in managing of public administration, authors define their own list of indicators as a selection from a wide range of sustainable development indicators. When choosing the suitable indicators, authors took characteristics and differences of public sector into consideration. Using of corporate management with regards on sustainable development in public sector within NPM framework can, according to authors, bring valuable benefits and effects.

Each organization should monitor and evaluate processes, activities, methods and submit proposals for improvement in various areas, including information in the field of sustainable development. Because “information is an important factor in decision making process on managers at the strategic level.” [24] Monitoring of provided services and all processes will help to streamline resource allocation and overall effectiveness of the functioning. As a crucial part of the process of monitoring should be assessing the environmental impact of organizational activities in terms of material consumption, water and energy consumption, emissions and waste generated, the state of renewable energy and overall energy efficiency. Modern scientific methods are useful for modeling of the indicators. Air pollution is influenced by the emission of pollutants from various sources as a consequence of human activity.
e.g. nitrogen dioxide concentration [13] and tropospheric ozone [14].

The report should include proposals for measures to further improve and streamline processes to eliminate or minimize their impact on the environment. Also social impact assessment should be included in monitoring activities. In other words, how organization contributes to greater health and safety of people and the impact the organization have on the local community. By implementing sustainable development principles into organizational performance management should contribute to better efficiency of processes, or strengthen relationship within the community and loyalty. And at the end, it contributes to the achievement of sustainable development.

Following paragraphs represent proposals of implementing principles of sustainable development. Then specific indicators for public sector will be provided.

**Economic indicators**
Among mentioned traditional economic indicators, following financial and non-financial indicators can be according to authors included: outcome, comprehensive income, Comprehensive income (national budget, taxes, charges, subsidies and other), return on invested capital, added value, return on equity.

**Environmental indicators**
Among environmental indicators can be included: material consumption, energy and water consumption, consumption of renewable energy, produced emissions, use of recycled materials, number of eco-innovation, generated waste, waste recycling rates, investments in eco-innovation, environment protection/rehabilitation expenditure (air, water, soil), number of launched clean technology products.

**Social indicators**
It assesses welfare of people both in and out of organization. In other words, how organization support products and services increasing wellbeing of employees and local community.

Within organization:
- Involvement of employees in decision-making
- Expenditure on the improvement of working conditions
- Expenditure on training employees (training related to sustainable development)
- Expenditure on requalification
- Number of green jobs
- Science & Research expenditure

Local community:
- Community projects support (financial/non-financial)
- Expenditure on low-cost housing
- Expenditure on green jobs creation
- Expenditure on public transportation

Indicators should be related to a specific unit (per year, per employee, or other). Situation for public sector is compared to private sector much more difficult in terms of measurability of outcomes. Both private and public organizations should have clearly defined vision and citizens should have clear idea how they can contribute to achieving public goals in cooperation with other stakeholders (e.g. public organizations, non-governmental organizations, private organizations, citizens). Then managers (both private and public) are the ones who implement those measures into practice.

Organizations should strive to reduce their environmental footprint. Public sector in general should support smarter growth which reflects economic, environmental and social principles of sustainable development based on appropriate data. “The sustainably development is connected with information needs.” [1] It is particularly public administration which helps to create and regulate environment where people live. Public administration should be therefore leader of implementing sustainable principles which may strengthen the loyalty and sense of belonging and responsibility of citizens. Authors suggest to implement following performance indicators for monitoring, managing and evaluating economic, environmental and social performance in public organizations. In the following paragraphs, both CPM and sustainable indicators valuable for public sector will be provided. It can also be regarded as an extension of CPM indicators for its use within the NPM concept:

**Economic indicators**
- Outcome
- GDP
- Comprehensive income (national budget, taxes, charges, subsidies and other)
- Return on invested capital
- Average wage
- Return on equity
- Expenditure/loans for innovative SMEs

**Environmental indicators**
- Municipal waste disposal
- Material, water and energy consumption and consumption of renewable energy
- Use of recycled materials and waste recycling rates
- Waste generated by households and enterprises
- Environmental protection investments (environmental investments in sewage treatment plants are very common on municipal level nowadays.) [16]

Social indicators
- Expenditure on the improvement of working conditions
- Expenditure on training employees (training related to sustainable development)
- Expenditure on requalification
- Number of green jobs
- Science & Research expenditure

Local community:
- Community projects support (financial/non-financial)
- Expenditure on low-cost housing
- Expenditure on green jobs creation
- Expenditure on public transportation

Also following non-financial indicators can be included in public sector:
- Number of new products and services
- New product and service success rate
- Number of complaints (customer satisfaction)

The aforementioned indicators are not final. However, it is up to the authority what kind of indicators will be included in the analysis, the choice depends on what kind of outcome is expected.

In this paper, authors selected the most representative economic, environmental and social indicators to be monitored by public sector and those are described in further text. In terms of reflection of all these three principles into performance evaluation, several methodologies have been developed. For the purpose of this article, Sustainable Value approach has been chosen as the most suitable tool for performance measurement and evaluation in public administration environment.

4 Sustainable Value as a Tool of Performance Measurement

In attempts to apply methodology using real data, the effort may be confronted with too much complexity. In case of this this article we will modify summary indicator designed within the SV methodology for its use within the CPM in environment of public administration, particularly at the regional level. This indicator will in sum evaluate the performance of unit, in this case, organization of local government at the regional level, which can be considered as new application of this methodology. Sub-indicators that make up summary indicator, will quantify chosen field and on this basis the performance will be measured and evaluated. Partial indicators include economic (most used throughout CPM in private sector), social and environmental filed.

4.1 Methodology

The welfare of our society can only be guaranteed if organizations use economic, environmental and social resources wisely, because it is increasingly recognized that all these three resources are in limited supply. Therefore, it is acknowledged that performance measurement must cover economic, environmental and social resources. [9]

Sustainable Value (SV) approach serves as an integrated tool, where environmental and social resources are stressed in the same way as the economic resources. This approach is mainly used to assess performance of manufacturing companies - see [10] or on national level - see [20]. In this paper, SV is applied on regional level within NPM, CPM and local authorities. This link is visualized in the following diagram:

![Fig. 1 Link among NPM, CPM a SV](Image)
4.2 Sustainable Value in Brief
The concept was developed by Prof Frank Figge of Queen’s University Belfast (United Kingdom) and Dr Tobias Hahn of (IZT) Institute for Futures Studies and Technology Assessment in Berlin (Germany).

SV approach measures sustainability performance in monetary terms, for this purpose it utilizes the well-known logic of financial analysis. [9]

SV compares the resource use of a region to a benchmark. As a result, SV shows in monetary terms the value that region creates (or destroys) by the use of a set of different resources. Advantage of this method lies in its universality and simple application. It operates with publicly available data and provides comprehensible results.

4.3 Method Application
For the method application Pardubice Region was chosen as one of fourteen higher-level territorial administrative unit of the Czech Republic, located in the eastern part of Bohemia and with a small part in northwestern Moravia. As the fifth smallest region in the Czech Republic, it is well-established for its chemical industry. Region is typical for its great diversity of natural conditions. Therefore, quality of the environment differs. Pardubice Region is comprised of four districts (Pardubice, Chrudim, Svitavy, Ústí nad Orlicí) and consists of 451 municipalities. [6] In total, there are more than 515 000 inhabitants (which represents 4.9% of the total population of the Czech Republic). Due to the negative demographic trends, the number of residents decreases. On contrary, proportion of people in senior age is growing. In 2013, Gross Domestic Product (GDP) per capita accounted 80.5% of the Czech Republic average.

4.3.1 Data Collection
SV compares the efficiency of the use of resources in a region to the efficiency of a benchmark. As a benchmark, data for the Czech Republic was collected. It was necessary to choose such indicators whose values were available both at national level and at regional level.

Good quality and reliable data were chosen to demonstrate the calculations. All the data was publicly available and collected from various sources. Economic, social and environmental performance data was available from the Czech Statistical Office [7]. No data had to be estimated.

Monetary data were converted from CZK to EUR based on the exchange rate at the last of the year. In this paper, following resources from all three dimensions of sustainability were taken into account:

Fig. 2 Flowchart of SV calculation

<table>
<thead>
<tr>
<th>Economic indicators</th>
<th>Environmental indicators</th>
<th>Social indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP (EUR)</td>
<td>Consumption of Electricity (MWh)</td>
<td>Percentage of unemployed persons (%)</td>
</tr>
<tr>
<td>Average wage (EUR)</td>
<td>Waste generated by enterprises (t)</td>
<td>Expenditure on requalification (EUR)</td>
</tr>
<tr>
<td></td>
<td>Environmental protection investments (EUR)</td>
<td>Science &amp; Research Expenditures (EUR)</td>
</tr>
</tbody>
</table>

SV calculation

SV outcome

Source: Own

4.3.2 Five Steps of Assessment
Authors of the SV propose performance assessment in following four steps: [9]

1. How much return does the company create with its resources?
2. How much return would the benchmark have created with each resource?
3. What is the value contribution of each resource?
4. How much Sustainable Value does the region create?

How much return does the company create with its resources?

In the first step, return of the region needs to be defined. In public sector on regional level, regional GDP is considered as the best return value. With regional GDP, efficiency of the resource use by the region can be calculated. The return (GDP) is devided by amount of each resource in one year. For example Consumption of electricity was 2 068 983 MWh in 2010, return was 849 077 763 €. Therefore, Pardubice Region achieved 3 057 € per each MWh.
Regional Resource Efficiency
\[ \frac{\text{Regional Return (GDP)}}{\text{Regional Resource Consumption}} \]  

Benchmark Resource Efficiency
\[ \frac{\text{Benchmark Return (GDP)}}{\text{Benchmark Resource Consumption}} \]  

Table 1 Pardubice Region and benchmark resource efficiency in 2010

<table>
<thead>
<tr>
<th></th>
<th>GDP of Pardubice Region in 2010 (EUR)</th>
<th>Amount of sources used in Pardubice region in 2010</th>
<th>Efficiency of Pardubice Region in 2010</th>
<th>GDP of benchmark in 2010 (EUR)</th>
<th>Amount of sources used by benchmark in 2010</th>
<th>Efficiency of benchmark in 2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electricity</td>
<td>849 077 763</td>
<td>2 068 983</td>
<td>3 057</td>
<td>156 735 421 209</td>
<td>45 368 222</td>
<td>3 455</td>
</tr>
<tr>
<td>Waste generated by enterprises</td>
<td>849 077 763</td>
<td>366 899</td>
<td>17 241</td>
<td>156 735 421 209</td>
<td>20 423 322</td>
<td>7 674</td>
</tr>
<tr>
<td>Environmental protection investments</td>
<td>849 077 763</td>
<td>910 769 000</td>
<td>175</td>
<td>156 735 421 209</td>
<td>897 790 406</td>
<td>175</td>
</tr>
<tr>
<td>Average wage</td>
<td>849 077 763</td>
<td>811</td>
<td>7 797 684</td>
<td>156 735 421 209</td>
<td>916</td>
<td>171 116 685</td>
</tr>
<tr>
<td>Unemployed persons</td>
<td>849 077 763</td>
<td>7,45</td>
<td>849 077 763</td>
<td>156 735 421 209</td>
<td>7,40</td>
<td>21 180 462 326</td>
</tr>
<tr>
<td>Expenditure on requalification</td>
<td>849 077 763</td>
<td>1 098 831</td>
<td>5 757</td>
<td>156 735 421 209</td>
<td>23 082 696</td>
<td>6 790</td>
</tr>
<tr>
<td>Science &amp; Research Expend.</td>
<td>849 077 763</td>
<td>83 766 105</td>
<td>76</td>
<td>156 735 421 209</td>
<td>2 100 059 465</td>
<td>75</td>
</tr>
</tbody>
</table>

Source: Own, based on [7]

Similarly, regional resource efficiency is calculated for years 2011, 2012, 2013, same as benchmark resource efficiency is calculated.

How much return would the benchmark have created with each resource?
In this step we try to answer a question, how much return would be created, if the resources in the region were used by the benchmark. For this purpose, we need to calculate Opportunity Costs (OC) of regional resources. Now we multiply efficiency of the benchmark with the amount of sources used in the region.

Opportunity Costs
\[ \text{Amount used by Pardubice Region} \times \frac{\text{Benchmark Return (GDP)}}{\text{Benchmark Resource Consumption}} \]  

Table 2 Opportunity Costs

<table>
<thead>
<tr>
<th></th>
<th>Efficiency of the benchmark in 2010</th>
<th>Amount used by Pardubice Region</th>
<th>Opportunity Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electricity</td>
<td>3 455</td>
<td>2 068 983</td>
<td>7 147 798 783</td>
</tr>
<tr>
<td>Waste generated by enterprises</td>
<td>7 674</td>
<td>366 899</td>
<td>2 815 709 129</td>
</tr>
<tr>
<td>Environmental protection</td>
<td>175</td>
<td>910 769 000</td>
<td>6 303 318 617</td>
</tr>
</tbody>
</table>
What is the value contribution of each resource?
In this part, we need to answer which resources are
used by the region in a value-creating way. In other
words, how much more or less value the region
creates with particular resource in comparison with
the benchmark.
Value Contribution (VC) for all seven
environmental, economic and social resources is
shown in Table 3.

\[ VC = \text{Regional Return(GDP)} - \text{OC} \]  

\[ SV = \frac{\sum^7_{n} VC_n}{n} \]  

Table 3  Calculation of VC and SV for Pardubice region in 2010

<table>
<thead>
<tr>
<th>Resource</th>
<th>GDP (EUR)</th>
<th>Opportunity Costs (EUR)</th>
<th>Value Contribution (EUR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electricity</td>
<td>6 325 629 336</td>
<td>7 147 798 783</td>
<td>-822 169 447</td>
</tr>
<tr>
<td>Waste generated by enterprises</td>
<td>6 325 629 336</td>
<td>2 815 709 129</td>
<td>3 509 920 207</td>
</tr>
<tr>
<td>Environmental protection investments</td>
<td>6 325 629 336</td>
<td>6 303 318 617</td>
<td>22 310 719</td>
</tr>
<tr>
<td>Average wage</td>
<td>6 325 629 336</td>
<td>138 813 110 764</td>
<td>-132 487 481 428</td>
</tr>
<tr>
<td>Unemployed persons</td>
<td>6 325 629 336</td>
<td>157 794 444 325</td>
<td>-151 468 814 989</td>
</tr>
<tr>
<td>Expenditure on requalification</td>
<td>6 325 629 336</td>
<td>7 461 245 739</td>
<td>-1 135 616 403</td>
</tr>
<tr>
<td>Science &amp; Research Expenditures</td>
<td>6 325 629 336</td>
<td>6 251 782 856</td>
<td>73 846 480</td>
</tr>
<tr>
<td><strong>Sustainable Value (SV)</strong></td>
<td></td>
<td></td>
<td><strong>-40 329 714 980 €</strong></td>
</tr>
</tbody>
</table>

Source: Own, based on [7]

4.4 Results
For better overview, we calculated SV for the period
of time from 2010 to 2013.
Based on data analysis over years 2010 to 2013, SV
for the Pardubice region is negative in every
monitored year. Following results can be interpreted
as the region did not use its environmental,
economic and social resources in a value creating
way compared to the benchmark (Czech Republic on average) and therefore, this region creates negative SV.
It is also desirable to analyze other 13 regions for better understanding, because even though negative Sustainable Value is more than 40 bilion EUR, in comparison with other regions the Pardubice Region does not belong to the worst regions.
Table 4 SV development from 2010 - 2013

<table>
<thead>
<tr>
<th>Sustainable Value (EUR)</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>- 40 329 714 980</td>
<td>- 38 849 261 086</td>
<td>- 40 082 341 844</td>
<td>- 37 221 745 747</td>
</tr>
</tbody>
</table>

Source: Own

The SV development over time is illustrated in figure below.

Fig. 1 SV development from 2010 to 2013

Outlined methodology applied on real data with its results can be used as valuable source of information for regional representatives for decision making process. Regional representatives can easily recognize strengths and weaknesses in every monitored area and can set special actions to avoid negative SV in the future.

5 Conclusion
Pressure on performance improvement in recent decades have caused that public organizations are looking for ways to become more efficient and, in some respect, to gain a competitive advantage. The concept of taking management methods from private sector and their using in public administration environment is called New Public Management. Although in recent years, it is often criticized public administration still uses its framework. And what is more we suggest New Public Management has not clearly defined boundaries and it is still open to new possibilities. Corporate Performance Management provides powerful tools which can be used to make effective decisions, manage growth, which are some criticized areas of public administration. There is thus an opportunity to use Corporate Performance Management within New Public Management framework. It can be argued that it will bring public sector significant benefits with regard to limitations and specifics that could bring practical application. Those arise mainly from differences in objectives and priorities of private and public sectors.

It is beyond the scope of this article to deal with detailed analysis of Corporate Performance Management implementation in public administration environment, but it can be considered as impulse and introduction to possible use of Corporate Performance Management in public administration.

According to new trends in perception of needs in public environment, we suggest to implement Sustainable Value approach as a tool for extension of Corporate Performance Management within New Public Management framework. Sustainable Value extends traditional economic indicators for monitoring, measuring and evaluating performance and serves as integrated tool, where environmental and social resources are stressed in the same way as the economic resources. In this paper, we provide unique application of Sustainable Value methodology on regional level. Output of this method based on real data for Pardubice Region offers a performance assessment of selected region in monetary terms. In other words, Sustainable Value approach expresses if the region uses its economic, environmental and social resources in a value - creating way compared with benchmark.

In provided example, authors declare that according to this method, Pardubice Region creates negative value over years 2010 to 2013. Based on the analyses, it can be easily recognized strengths and weaknesses in each indicator and adopted specific measures to avoid the negative development in the future which opens up wide practical and also scientific possibilities.

References:


