

## **BUSINESS INTELLIGENCE APPLICATIONS – POSSIBLE INSTRUMENTS FOR ECONOMIC INTEGRATION WITHIN THE EASTERN PARTNERSHIP**

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**Abstract:** *Eastern Partnership includes, in addition to bilateral components (Association Agreements, Deep and Comprehensive Free Trade Areas/DCFTA), also a multilateral dimension as "economic integration and convergence with EU policies". This stated purpose of the partnership involves the need for adaptability to regional conditions and a differentiated approach to economies in the region in order to establish common objectives. Partner countries have aspirations that vary by geographic location, state of relations with the European Union and Russia, foreign policy objectives in medium and long term, real prospects of joining the European Union, or internal stability in economic and social aspects. Macroeconomic indicators specific to each country must undergo a dynamic analysis aimed on current situations and also on evolution of economic life. Thus, it requires processing a huge volume of historical data, creating possible scenarios based on policies implemented or being implemented to reach comprehensive information to provide a realistic picture of the economic growth at the macro level. Successfully implemented in enterprises, Business Intelligence (BI) applications can be used to analyze large volume of data required to be processed to reach full and useful reports for the process of negotiation between the partners involved in the agreements referred and, very importantly, to establish a common language for all bodies and institutions co-opted into negotiations. Differences between the EU and other Eastern Partnership countries are obvious but economic common terms and methods or techniques of similar work can help plan positive developments in the negotiations and the desired convergence of economic policies. Business Intelligence tools simplify the presentation of needed information for discussions and provide a foundation in starting up joint analysis of economic dynamics in the area to reach complete and actual lines of future possible cooperation. This paper aims to reveal practical aspects on possible implementation of BI capabilities in the field of data analysis that is needed for the economic integration promoted by the Eastern Partnership.*

**Keywords:** BI; DCFTA; AA

**JEL Classification:** A1; A2

### **Introduction**

Agreeing to the European Council, the declared aim of the Eastern Partnership is to strengthen the political association and economic integration with neighbors of European family namely Armenia, Azerbaijan, Belarus, Georgia, Moldova and Ukraine (European Council, n.d). It's enough just to have a short look over these countries and an immediate conclusion should be that this goal is ambitious and quite delicate. The reason is very simple because discuss is over cooperation with an ex-Soviet space with specific political, economic and social concepts and, most importantly, the great power from east must not be neglected: Russia. There are also smoldering conflicts in the area (the

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Armed clashes in Nagorno-Karabakh, conflict in Georgia, the Transnistrian issue, Crimea, etc.) that may induce instability in region.

Under these circumstances, the Eastern Partnership establishes a differentiated approach to the six countries involved depending on the priorities of each (foreign policy, economic indicators, civil society, energy security, strategic geographical location etc.) and the progress on relations with the European Union. These regional peculiarities have led to the need for a single coherent policy framework within the Partnership.

This paper suggests a Partnership approach by analyzing practical details of economic integration and sets as main objective the promotion of Business Intelligence applications in implementing the strategies proposed in this framework of cooperation policies. As context, the areas covered by the 2014 – 2017 Work Programme (European External Action Service, *n.a.*) are:

- Transport
- Small and Medium Enterprises (SME)
- Environment and Climate Change
- Trade and Trade Related Regulatory Cooperation
- Agriculture and Rural Development
- Statistics
- Taxation and Public Finance
- Labor Market and Social Policies
- Macroeconomic and Financial Stability
- Information Society and Media.
- The study is focused on SMEs sector for at least two reasons:
- Proven Business Intelligence applicability in the economic entities due to recognized reporting, updating and security capabilities. Organizations implementing these platforms develop an efficient and updated information system that can provide online and detailed reports to those interested.
- The importance of this sector within the European Union, as evidenced also by "The Small Business Act for Europe" - SBA (European Commission, *n.a.*) as a framework of policies to support entrepreneurship by simplifying regulations and removing barriers to the development of SMEs.

This paper addresses subject matter on the following structure:

1. Role and importance of Business Intelligence in information processing.
2. Need for convergence of economic policies within Eastern Partnership.
3. Opportunity of a single platform for reporting, storing and processing information.

As a methodology, the study works on official documents of the European Council, reactions and opinions of various analysts in partner countries, but also Eurostat statistics and literature in the area of Business Intelligence. Considering the problems found, the particularities of member states, existing data on trade between the partner countries and the EU, institutional framework created or need to be created, Association Agreements etc. the following premise is considered: the existing opportunity of creating a unified information system to support economic integration efforts within Partnership.

### **1. Information – Basic Element in Development of Eastern Partnership Strategies**

Regional cooperation covered by the Eastern Partnership and strengthening EU relations with its neighbors from the east is based on a complex processing of information from various sources which are generally formal and controlled at the state level. Information and best practices exchange should be implemented through technical seminars and workshops involving EU Member States and partners that must appoint representatives of parliaments, civil society, local and regional authorities , financial institutions etc. Thus, it is necessary to have uniform working procedures, formats of reports or economic indicators generally accepted and relevant to the essence of discussions and proposed objectives. There are already planned activities as mentioned in the 2014 – 2017 Work Programme, in line with the general guide and rules of procedure of the EaP multilateral platform.

Collection of relevant data, regular monitoring of progress, analyzing and comparing various indicators of development involves using common terms and instruments capable of processing large volumes of data. The successful implementation of Business Intelligence applications in major companies can create a precedent observable by analysts involved in the design of a free, sustainable and inclusive market in partner countries.

#### ***1.2. Role and Importance of Business Intelligence in Information Processing***

The multitude of data or information facing an organization under the current business environment puts pressure on decision-making posts and complicates analysis systems and traditional

control that supports it. Development of Internet economy, digitization of most processes related to it, considerable cheapening of data sources and access to information and knowledge diversification presentation formats in general led to "bombing" entities with excess data / information.

Business Intelligence tools come to respond to these challenges by arguments that recommend it as a source of reliable information. As a simplistic definition, Business Intelligence tools cover a wide range of solutions to support the managerial decision-making process by analyzing large volumes of data. In essence, the final product is comprehensible information, clean, safe and accessible at the right time, which is exactly what management needs in order to operate efficiently. The applicability of these solutions is not just a static presentation of reality but offer future scenarios, projects Budgets, orients marketing policy or personnel, sets trends for various indicators or shapes profile of business partners (customers and suppliers). The financial analysis plays an important role and become reliable tools in developing specific strategies.

A defining part of a manager's job is to take decisions. Improving the quality of decision making leads, ultimately, to increase overall organizational efficiency and business intelligence tools can play a decisive role in this regard - hence the original meaning of " Decision Support ". Such facilities provide win-win solutions for end users by increasing productivity of IT departments that are in a position to solve special requests enabling decision makers to become increasingly more satisfied. Operational and analytical processes are parts of the organization and Business Intelligence proves to be a reliable partner in both situations (Schiff, 2008).

For management, the benefits of BI solutions can be summarized in:

- better decisions based on substantiated answers to business demands
- increased efficiency and productivity
- optimized strategies for income generating
- monitoring trends and anomalies discovery
- forecasting business opportunities
- improving customer relationships.

### ***1.2. Need for Convergence of Economic Policies within the Eastern Partnership***

Economic integration within EU knows its own adventure but relies on a set of clear and common rules and principles. The strategies implemented in this regard are aimed at shaping a single

market, free movement of goods and people, a single currency and recognizes small and medium business sector as a key driver in the economic development of the community.

In this respect, the Small Business Act for Europe (SBA) (European Commission, *n.a.*) sets as priorities:

- Promote entrepreneurship;
- Favorable legal framework for SME sector;
- Access to finance;
- Access to markets and internationalization.

Naturally, Platform 2 of the Eastern Partnership align its policies on small and medium businesses at SBA directives and brings together experts from the countries involved to ensure not only the implementation of the mentioned principles but also the implementation of the DCFTA on the economic side. SMEs strategies interfere with the line of agriculture, rural development, environment and climate, corruption, etc. to ensure consistency in integration. In this respect, in 2015 the Flagship Initiative regarding SMEs consisted of a set of active projects of over 100 million euros dedicated to supporting this sector (European Commission, *n.a.*). So conceived and launched projects in partner countries are oriented to certain issues and the results must be monitored, collected and processed in order to perform highly detailed analyzes. Increasing number of employees, better financial results and easy access to funding are concrete results of the agreements and reveal ultimately the competitiveness of SME sector.

Projects representatives within this panel should always come with new information that will contribute to this endeavor in forums in order to share the experience related to the implementation stage of DFCTA. At the same time, there are to be considered practical information related to the collaboration between the European Commission services and the member countries of the partnership. The Work Program for 2014 - 2017 envisages a set of objectives and planned activities that, in case of SMEs, are supervised by the Directorate General Enterprise and Industry.

To this end, the SME Panel aims meetings at least once a year at the level of experts drawn from the ministries and institutions of the countries involved, depending on the topics covered. The projects concerned are:

- The second round of SBA assessment - identifying strengths and weaknesses in partner countries' policies on small and medium enterprises as well as solutions for improving the legal framework
- Assisting partner countries in implementing reforms based on recommendations given by the SBA assessment

- East Invest II component - to promote trade and investment and strengthening SME connectivity, sustainability and encourage business associations in order to sustain long-term cooperation with organizations in EU
- Auditing and reporting (STAREP ) - improve key capabilities of key financial institutions in partner countries to provide specialized support small and medium business sector
- EGP / BAS - technical assistance for organizations to adapt to the rigors of a liberal market economy
- SME financing facilities - combining loans with EU financial grants offered
- Export Marketing Training - focuses training on entering to the EU markets
- Entrepreneurial Learning - to focus on young entrepreneurs and female entrepreneurs.

Projects dedicated to supporting and promoting small and medium enterprises of the Eastern Partnership establish goals on long term and require sustained convergence efforts by individual Member States and careful monitoring of the institutions involved in this process.

### *1.3. Opportunity for a Single Platform for Reporting, Storing and Processing Information*

The objectives announced by Platform 2 on SME (improving the business environment, alignment with the principles and spirit of the SBA, the implementation of the DCFTA with focus on SME) reflects an ongoing effort to analyze the evolution of indicators and statistics based on information collected while real. The projects implemented or under implementation aim at achieving measurable results of which interpretation enables measuring the effectiveness of actions taken and allows comparability of regions , sectors of economy, time period, etc. This is why a detailed reporting system is needed, being regularly updated with actual, secure and consistent data, system that will be generated and used on a common working platform.

It was brought into discussion the possibility of creating a **Regional Resource Centre** bringing together initiatives and best practices in SME sector within Partnership. As a first step, it is suggested to use the infrastructure created by **CIRCABC (Communication and Information Resource Centre for Administrations, Businesses and Citizens)** which is a web application dedicated to communities interested in working collaboratively. This basically creates easy access to public documents for those interested in contributing to the harmonization of e-Government (European Commission, *n.a.*, Interoperability Solutions for European Public Administrations, available at: [http://ec.europa.eu/isa/about-isa/index\\_en.htm](http://ec.europa.eu/isa/about-isa/index_en.htm)). Undoubtedly, this feature in programs designed ISA (Interoperability Solutions for European Public Administrations) of the European Commission can

be adapted to the requirements of reporting and data processing within the Eastern Partnership in the sense that there is already the necessary infrastructure.

It should be noted, however, that the particularities of the Eastern Partnership can create some vulnerabilities in processing information due to the fact that still it is not still possible to speak of a desired harmonization of rules and procedures for collecting and reporting in the countries involved. The solution may be given by a set of common tools for data processing to provide basic infrastructure for monitoring progress towards economic integration. **Business Intelligence applications** provide clear solutions on some issues through detailed reports and solid models in terms of predictability. Specifically, these applications can be implemented on certain specific objectives such as:

- Projects monitoring
- Dynamics of financial indicators.

*Projects monitoring* is a supervising process from the perspective of planned / budgeted versus actual. The main purpose of BI focused on this area is generally to provide relevant information about hours spent on various activities, referrals and phases of the project on one hand and on the other a perspective view towards compliance budgets, the number of hours etc.

**Figure 1 – Example of BI analysis tool offered BIT Software projects - project analysis by time spent in one year and the degree of achievement**



Source: BITSoftware, White Paper 2012, *n.a.* available at: <http://www.bitsoftware.eu/fileadmin/white-paper-ro-bitsoftware-socrate-bi.pdf>

*The dynamics of financial indicators* provide possible methods for measuring progress in the implementation of policies on small and medium enterprises. A complete analysis of multiple

parameters involve the collection of data from trusted and official sources, and then processing them on a common working platform to ensure accessibility, collaborative capabilities and constant updating of information. At the level of an enterprise, BI platform can manage resources to cope with the financial realities in a constantly changing and can fulfill functions such as reporting to customers (Yahav, 2014). Results - so-called "out-put" – of Business Intelligence applications are distinguished by the presentation and analytical possibilities offered. Dashboards comprise the following advantages which distinguish them from conventional reports (Business Intelligence, *n.a.*):

- Improving employee performance - BI tools provide details of all sides of the business including human resource competitiveness and productivity. Monitoring employees' work may lead to an acceleration of efforts on their part and more accurate dosing efforts in this regard.
- Monitoring progress towards achieving the objectives - the pursuit of certain projects allow management to see whether action plans or business strategies are implemented and followed to determine whether the organization is on track in achieving objectives.
- Saves time and money - using dashboards allow substantial reduction in management time that would be required to analyze the figures. Centralized and integrated nature of these out - put sites at once allows viewing data from multiple sources without the need to generate additional spreadsheets or manual data aggregation. It is also possible to view strategic information on removable media like smartphones or tablet, anywhere and at any time.
- Prevention of human error - the decisions are taken on the basis of solid arguments not only on suppositions. Moreover, the information may be disclosed to other departments and thus resulting in the streamlining information flows and a reduction in the lack of communication within a company.
- More valuable information - visual form of reports and analyzes are presented as information to be better digested. For example, negative trends can be immediately detected at an early stage and it becomes possible to take preventive measures in this regard. Basically, because the format of dashboards, information can be quantified or measure, unlike the classic reports which may have been overlooked.

Therefore, experience in organizations use of BI tools can be exploited in the reporting systems of Platform 2 of the Partnership due to the facilities offered in the management of economic information. Incidentally, one of the wishes of the 2014 – 2017 Work Program is to ensure the quality of financial reports containing reliable information about the financial position and performance of

SMEs. In this sense, the project is designed to support STAREP auditing and reporting methodology related to key institutions involved in the implementation of financial reforms.

Alignment with European and international auditing standards facilitate access to international financial resources since this can be a guarantee of sound financial information, verified and provided by modern systems of accounting and reporting.

## **Conclusions**

Economic integration promoted by EaP involves creating a healthy business environment which translates to increased contribution to GDP, creating new jobs, extensive trade relations at European or international level, access to financing, new investments, etc. The convergence of economic policies with those of the EU partner countries is based primarily on reforms to facilitate development of small and medium enterprises to connect them with Europe. This process is comprehensive and based on a series of strategies and projects with clearly defined goals whose achievement should be closely monitored. Collecting, processing and reporting information regarding small and medium enterprises sector must be based on verified procedures and techniques to ensure a true picture of progress.

The present study suggests applying Business Intelligence facilities in the institutions in charge of the partner countries but also on the level of working platforms involved in the construction of the Eastern Partnership through a transparent and efficient information flow. Reports which can be generated are able to reveal the dynamic, current and deep aspects of the economic realities of this pact.

Moreover, the need to audit the financial statements of entities concerned by projects and harmonizing accounting rules are goals of efforts to integrate and access to funding sources. The existence of efficient information systems provides a complete picture of the development of economic relations within Partnership and can induce appropriate policies to both Eastern space and European spirit.

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