



A SUMMARY OF SELECTED SURVEY RESPONSES FROM ENTREPRENEU RS, MANAGERS AND SPECIALISTS

BAS4SC Project Team



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1. Companies

- A total of 127 companies participated in the survey. The breakdown of respondents by country is shown in Chart 1. 62% of them are companies from Poland.

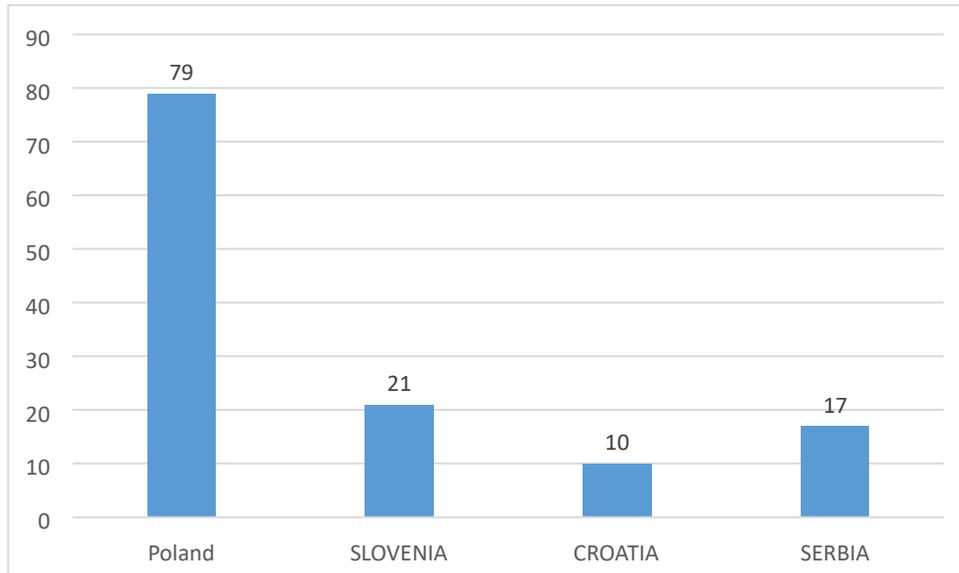


Chart 1. Participation of companies in the survey by country

- 79 enterprises from Poland participated in the study. They employ more than 501 employees (40.5%). These companies can boast extensive experience on the market - they have been operating for 11 to 30 years (51.9%) and for more than 30 years (32.9%). Most of them operate on the global (58.2%) and domestic (41.8%) markets.
- 21 enterprises from Slovenia participated in the study. The study was dominated by small companies (57.1%) and those employing more than 501 employees (28.6%). Companies have extensive experience on the market - they have been operating for 11 to 30 years (42.9%) and for more than 30 years (28.6%). They operate on the European (61.9%), global (52.4%) and domestic (28.6%) markets.
- 10 enterprises from Croatia participated in the study. The study was dominated by medium-sized companies employing 51-250 employees (40%) and large companies employing more than 501 employees (30%). These companies operate from 11 to 30 years (80%). They operate on the European (60%) and domestic (40%) markets.
- 17 Serbian companies participated in the study. The study was dominated by large companies (70.6%). The companies have extensive experience on the market - they have been operating for 11 to 30 years and for more than 30 years (41.2% each). They operate on the global market (88.2%).



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2. Practical experience in the field of BAS

- Respondents (practitioners) from Poland admit that they have no practical experience in BAS (75%) (Chart 2). They also point to experience resulting from training (11%) and courses (4%). They also took part in projects in the researched scope (11%).

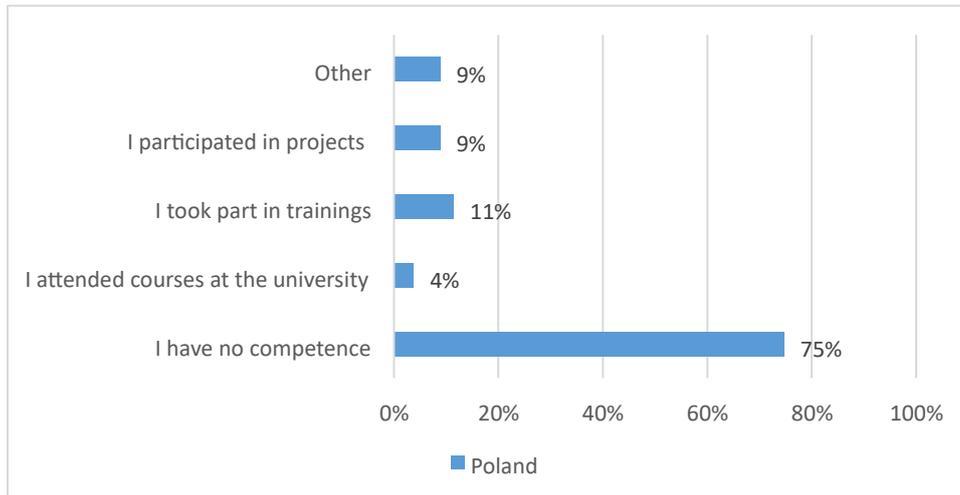


Chart 2. Indications of respondents (practitioners) from Poland regarding having practical experience in the field of BAS

- Respondents (practitioners) from Slovenia confirm that they have no practical experience in BAS (76%) (Chart 3). They also point to the experience resulting from the courses (14%). They also took part in projects in the researched scope (10%).

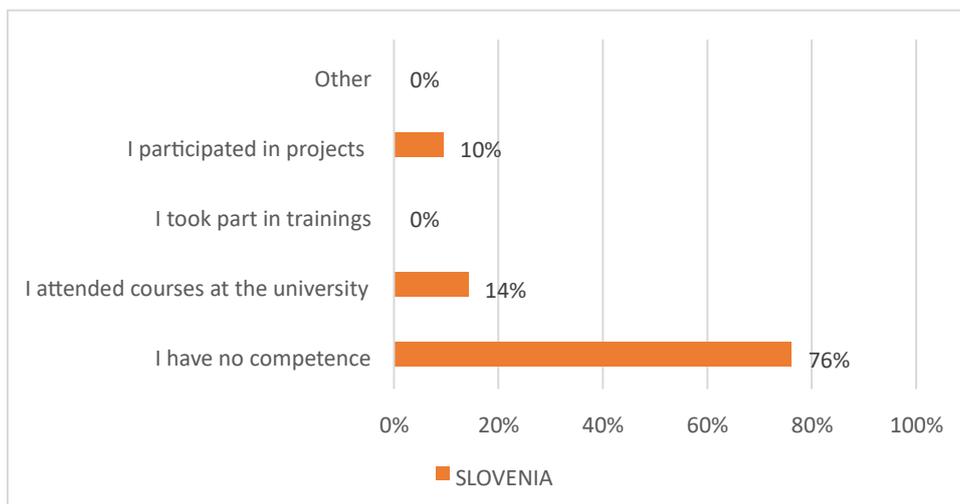


Chart 3. Indications of respondents (practitioners) from Slovenia regarding having practical experience in the field of BAS



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- Respondents (practitioners) from Croatia confirm that they have no practical experience in BAS (30%) (Chart 4). They also point to the experience resulting from the courses (20%) and training (20%).

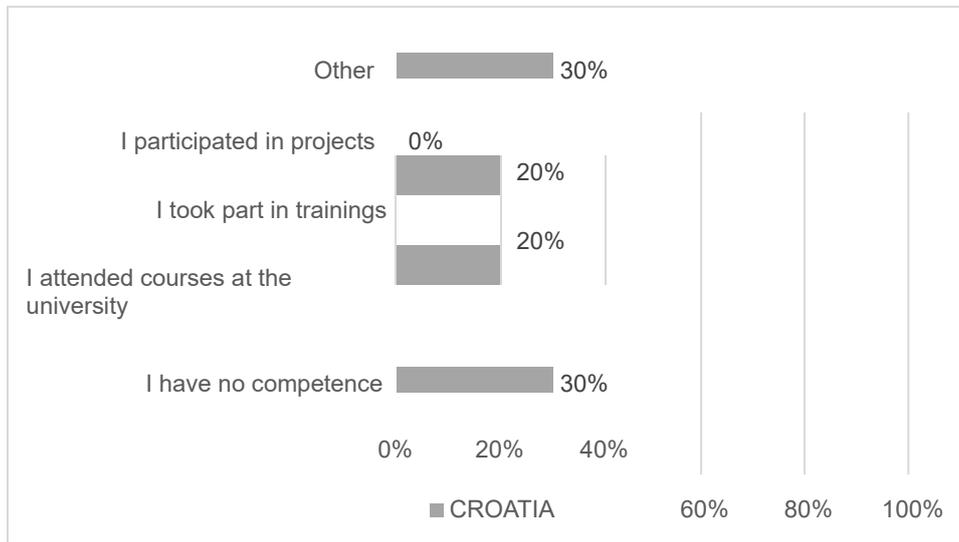


Chart 4. Indications of respondents (practitioners) from Croatia regarding having practical experience in the field of BAS

- Respondents (practitioners) from Serbia confirm that they have no practical experience in BAS (65%) (Chart 5). They also point to experience resulting from training (12%) and courses (12%). They also took part in projects in the researched scope (6%).

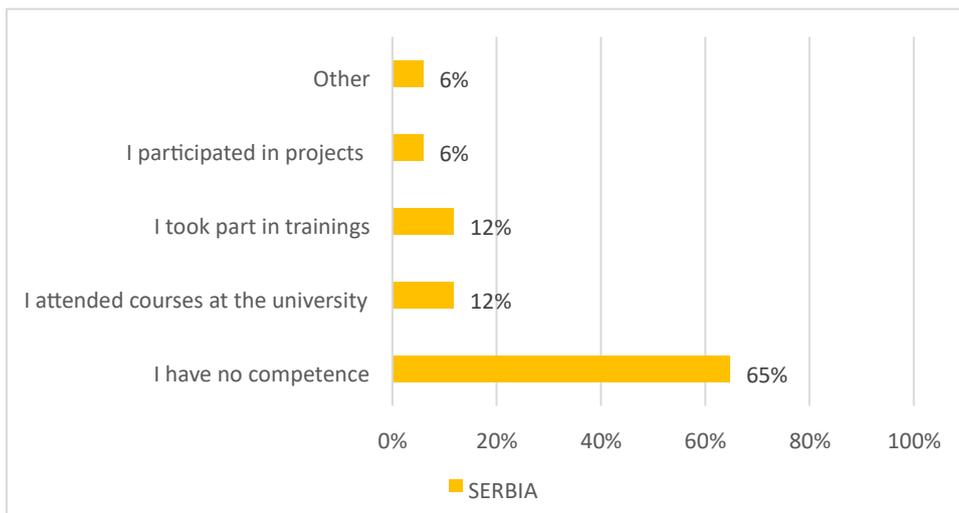


Chart 5. Indications of respondents (practitioners) from Serbia regarding having practical experience in the field of BAS



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3. Competence needs analysis

The competency assessment was conducted among companies in the same way as in A2.2. The list of competencies examined was derived from the analysis of the educational programs analyzed as part of Task A2.1 of WP2. The list of competencies examined:

- Forecasting Techniques
- Business Data Analytics
- Statistics for Business Analytics
- Sampling and Experimental Design
- Spatial Statistics
- Data Ethics and Data Security
- Stochastic Simulation
- Optimization in Supply Chain Management
- Optimization models and heuristic methods for managing production systems
- Vehicle routing
- Heuristics in analytics
- Last Mile Delivery: data analytics and models
- Game theory applied in logistics
- Lean Six Sigma Statistical control
- Data Visualisation Methods
- Creation of Reports and Dashboards
- Spreadsheet analysis
- Big Data Research Methods
- Big Data Systems
- Software tools in logistics
- Microsoft Excel
- Data analysis and R software packages
- Data mining
- Social Network Analysis
- Python for Data Science
- Business Analytics Foundations including R, SQL, and Power BI software
- Statistical data processing SPSS
- Statistical Data processing SAS EG
- Data Mining and Data Warehousing
- Designing the databases
- SQL
- Software tools for data management
- Enterprise Resource Planning Systems (ERP)
- Integrated enterprise management (SAP, ERP)
- IoT and SCADA Technologies
- Data protection
- Information security
- Systems for automatic identification (RFID, barcodes)
- Blockchain Technologies
- General programming
- Artificial Intelligence and Machine Learning



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- Software tools in logistics
- GIS in logistics
- Discrete event simulation
- Stochastic Modeling
- Business Process Modelling
- Simulation of Logistics and Supply Chains
- Agent-based modelling and simulation
- Power BI
- Tableau
- Principles of Microeconomics
- Principles of Macroeconomics
- Data Management and Business Intelligence
- Data Security Management
- Knowledge Management
- Controlling in Supply Chain Management
- Supply Chain and Sourcing
- Supply Chain Risk Management
- Mathematical models for Supply Chain Management
- Inventory Management
- Outsourcing (Make of Buy)
- e-logistics
- Information Systems & Business Process Management
- Quality management
- Sales and service management
- Lean Management
- Six Sigma Techniques
- Strategic Analyses
- Cost-Benefit Analysis for Business
- Econometrics
- Digital economics
- Inference fuzzy
- Neural networks
- Decision trees
- Pattern recognition
- Genetic algorithms
- Latent Dirichlet Allocation algorithm
- Latent Semantic Analysis
- Discovering regularities in data
- Understanding and interpreting the data
- Advanced Mathematics for Decision Making
- Game Theory
- Operations Research
- Optimization Methods and Tools
- Combinatorial optimization and metaheuristics
- Large Scale Optimization
- Integer Programming
- Network Optimization





- Transport Optimization
- Optimization using metaheuristics
- Algorithm design
- Introductory statistics
- Statistics for Business Analytics
- Correlation analysis
- Multivariate analysis
- Hypothesis testing
- Linear Regression with Single and Multiple Regressors
- Dynamic Simulation of closed-loop systems
- Modelling and Simulation of Dynamic Systems
- Complex Systems
- Process analysis and Petri nets

The aim of the competency study conducted among enterprises, managers of logistics and manufacturing companies, and specialists was to identify needs in terms of analytical competencies among their staff. The perspectives of enterprises and managers are particularly important in the context of streamlining educational programs. Identifying these needs will allow for the identification of competency gaps in the offered educational programs.

The results of the competency study are presented in: Attachment 1_BAS4SC_WP2_Companies – sheet Analysis_C_ALL;

A detailed analysis of the results of the research conducted among entrepreneurs, managers and specialists was presented in: Attachment 1_BAS4SC_WP2_Companies:

- Poland – results in the spreadsheet: Analysis_C_PL;
- Croatia – results in the spreadsheet: Analysis_C_HR;
- Slovenia – results in the spreadsheet: Analysis_C_SI;
- Serbia – results in the spreadsheet: Analysis_C_SR.

Attachments

- Attachment 1_BAS4SC_WP2_Companies

