

**INTERNATIONAL E-CONFERENCE  
“ENTERPRISES IN THE GLOBAL ECONOMY”, 3rd Edition  
4 October 2018**

**START-UPS’ INVOLVEMENT IN  
SUSTAINABLE DEVELOPMENT:  
EVALUATION OF A EUROPEAN CASE**

**Irina-Eugenia IAMANDI  
Laura-Gabriela CONSTANTIN  
Mihaela Cristina DRĂGOI**

The Bucharest University of Economic Studies,  
The Research Center in International Business and Economics – CCREI (ROMANIA)

# Structure of the paper

## **Abstract**

### **1. Introduction**

### **2. Review on start-ups and sustainable development**

### **3. Research data and methodology**

### **4. Results and interpretation**

### **5. Conclusions and further research**

## **References**

# 1. Introduction

- Economic growth + Social and Environmental development
- Corporate support for sustainable development (SD) – prerequisite of competitive advantages and differentiation
- SD objectives as a basic component of SMEs' and start-ups' activities
- Increasing interest for start-ups' support for the objectives of SD → win-win strategy for business ventures and society
- **Research objective:** To analyse and propose an evaluation framework for **Start-ups' Involvement in Sustainable Development Goals (SISDG)**, based on the case of 27 BG, HR and RO winners of StartUp Europe Awards 2017 competition.

## 2. Review on start-ups and sustainable development

- United Nations sustainable development goals (UN-SDGs) and private companies
- Increasing number of start-ups aiming to achieve the SDGs
- PRO and AGAINST arguments in the literature regarding the role of start-ups' support for SDGs
- CSR is not enough for a sustainable business → a wider range of stakeholders' interests should be considered
- Start-ups which include long-term sustainability in their business planning tend to become more effective on the long-run.

# 3. Research data and methodology (1)

- To investigate the SISDG by grouping 27 well-performing start-ups from BG (12), HR (6) and RO (9) given their economic (EC), social (SOC) and environmental (ENV) contribution to SD
- Start-ups awarded in StartUp Europe Awards 2017 in 14 categories
- Innovative assessment framework based on grades from 0 to 3:
  - 0 = no involvement at all in SDG
  - 1 = low or scarce involvement in SDG
  - 2 = moderate to strong involvement in SDG
  - 3 = very strong or excellent involvement in SDG
- Start-ups graded for all UN-SDGs (17), except for G5, G16 and G17  
→ 14 SDGs kept in the final analysis

# 3. Research data and methodology (2)

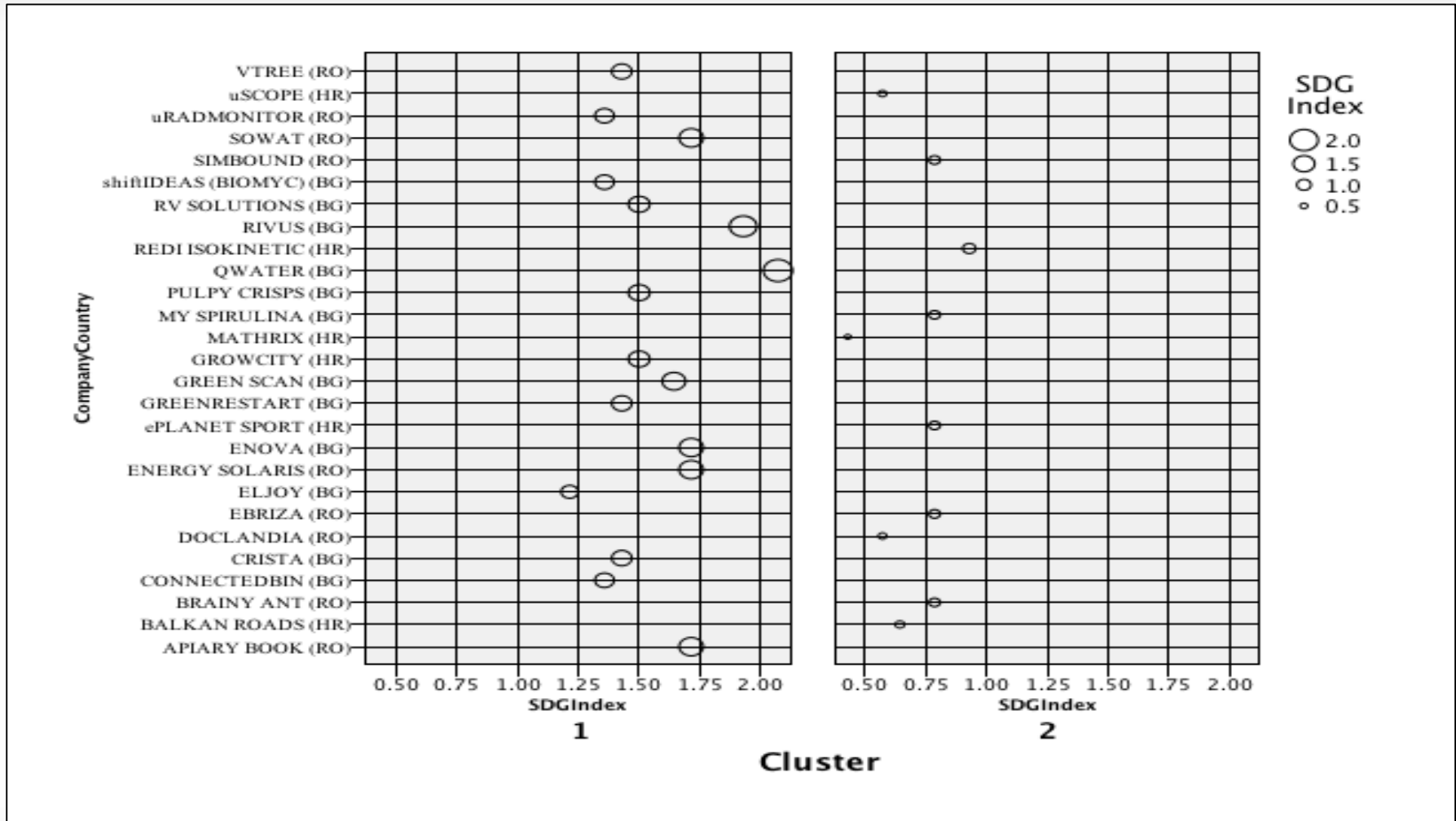
- Elaboration of **four innovative composite indices** for assessing SISDG:
  - **SDG Index** (all 14 SDGs)
  - **EC-SDG Index** (G1, G2, G8, G9, G10 and G12)
  - **SOC-SDG Index** (G3, G4, G6 and G11)
  - **ENV-SDG Index** (G7, G13, G14 and G15)
- Application of **two-steps cluster analysis** for grouping the 27 start-ups based on their EC-SDG, SOC-SDG and ENV-SDG contribution
- Analysis performed through **IBM SPSS (Statistics and Modeler)**.

# 4. Results and interpretation (1)

- Formation of **two SISDG clusters**:
  - **Cluster 1: High SISDG** (17 start-ups) – order of values: ENV, EC, SOC
  - **Cluster 2: Low SISDG** (10 start-ups) – order of values: EC, SOC, ENV
- Discriminating between the two clusters:
  - First three positions: ENV-SDG Index, SDG Index, G13 → clusters' differentiation
  - Last three positions: G14, G1, G8 → clusters' similarity

## 4. Results and interpretation (2)

### Overall SISDG clustering pattern

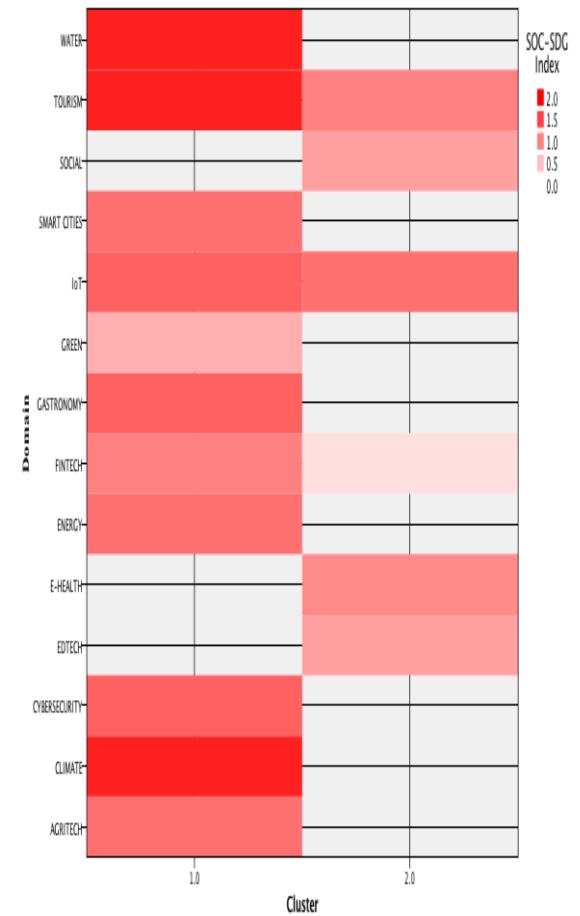
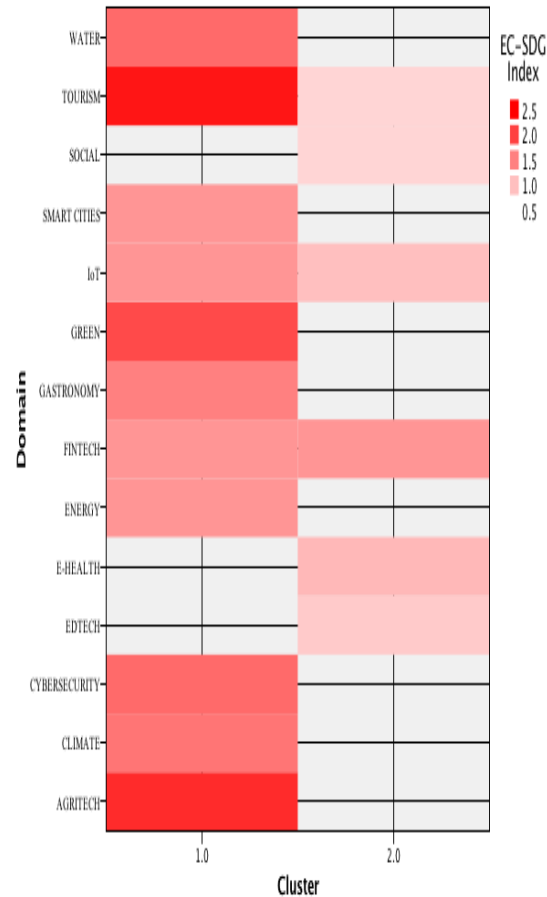
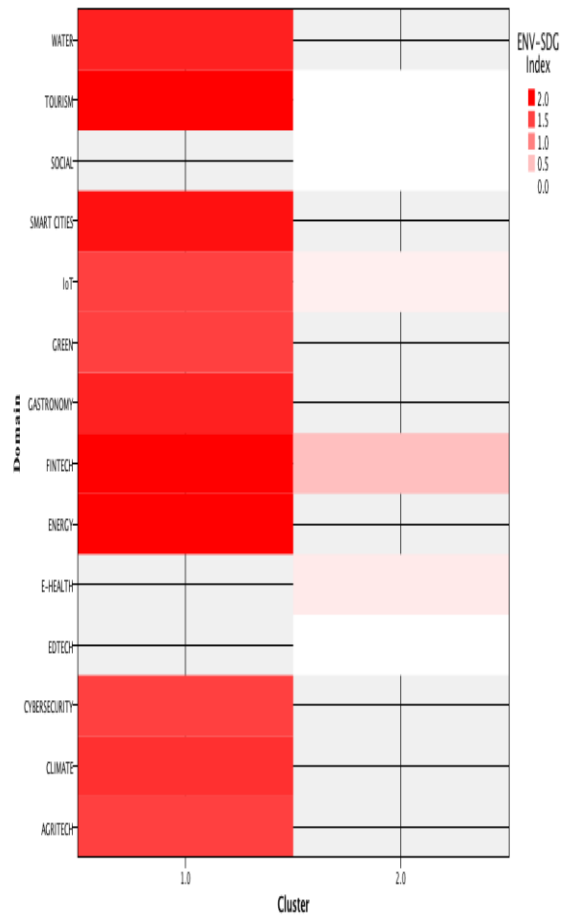


Source: Authors' contribution (developed in IBM SPSS Modeler).



# 4. Results and interpretation (3)

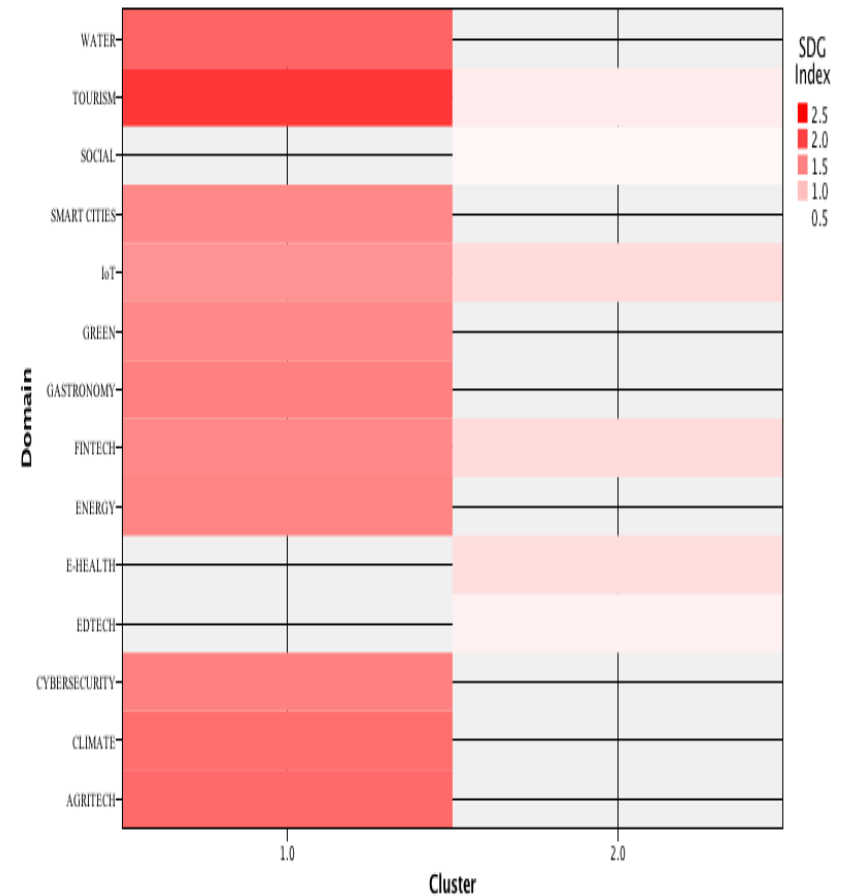
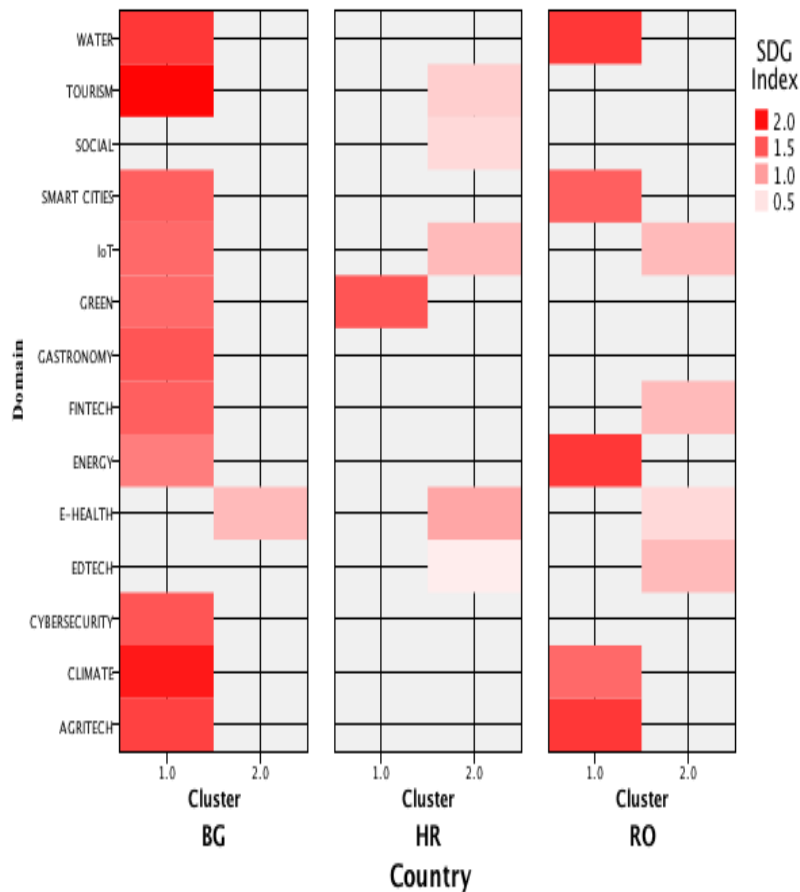
## Clusters' heat maps for the SISDG pattern by domain: ENV, EC, SOC



Source: Authors' contribution (developed in IBM SPSS Modeler).

# 4. Results and interpretation (4)

## Clusters' heat maps for the SISDG pattern at country and cluster level



Source: Authors' contribution (developed in IBM SPSS Modeler).

# 5. Conclusions and further research

- Investigated start-ups highly include SDGs in their daily operations
- Overall SISR discriminates among the two clusters
- Distinct environmental discrimination and rather social similarity between the two clusters
- Bulgarian start-ups ventures are the SDG leaders
- Tourism sector is best supported regarding SDG
- Economic component is strongest considered for SDG
- Best business performing start-ups are also properly considering the requirements of sustainable development
- Further research directions.

**INTERNATIONAL E-CONFERENCE  
“ENTERPRISES IN THE GLOBAL ECONOMY”, 3rd Edition  
4 October 2018**

**Thank you for your attention!**

**Irina-Eugenia IAMANDI, [irina\\_iamandi@yahoo.com](mailto:irina_iamandi@yahoo.com)**  
**Laura-Gabriela CONSTANTIN, [constantinlauragabriela@gmail.com](mailto:constantinlauragabriela@gmail.com)**  
**Mihaela Cristina DRĂGOI, [mihaelacristina.dragoi@gmail.com](mailto:mihaelacristina.dragoi@gmail.com)**