

Article

Integrating Sustainability and Lean: SLIM Method and Enterprise Game Proposed

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Abstract: Sustainability and leanness are organizational approach concepts for more efficient activities and increased competitiveness. This paper presents a study and an application of the concepts of sustainability and lean, with the purpose to capitalize on the benefits of the two concepts' tools when used together in an industry and education activity. A literature review was carried out to evaluate qualitatively and empirically the concepts of sustainability, lean, and enterprise games, and the possibility to integrate the first two concepts into a new tool applied into an enterprise game. An online survey was done to identify which tools are used within companies in the region, how and what training methods they used, and what the reported benefits are. The survey results were used to design a new tool integrated in a new enterprise game (SLIM) developed by the authors. The game was tested and validated in educational laboratory with students and actual employees from companies. The game follows the frame of an enterprise game, considering the simulation of enterprise classical functions. The game's purpose is to improve the activity in successive rounds. A scorecard is used to fill in and compute the key performance indicators (KPIs), and a new indicator is proposed (SLIMx). Applications of the instrument/game include: students' training in an educational laboratory; lifelong learning; professional training in companies; and professional perfection/reconversion of potential employees and the unemployed. The SLIM game was simulated in a team of 15 players over three rounds, with teachers playing the role of the supervisor. A number of possible improvements have been identified. The next step is testing it in enterprises with various fields of activity. SLIM has proven to be an effective solution to improve organizational efficiency and motivate players to gain new knowledge.

Keywords: waste management; efficiency; quality; game; sustainable development; lean production; process improvement; production flexibility

1. Introduction

Currently, there are a number of management approaches that contribute to increasing competitiveness and business development capacity. Some businesses are targeting environmental practices to improve process activities and improve public image. Many businesses are concerned about the tools, methods, and techniques that help streamline process resource utilization. Most are involved in corporate social responsibility activities to improve their public image. These CSR activities are complementary to processes streamlining actions. Sustainability is addressed in many companies [1–3]. The three dimensions of sustainability are addressed: social, economic, and environmental. Some organizations address cumulatively the three responsibilities, others partially. Involvement in sustainable development is not mandatory at the national or international level. Sustainability reporting is also optional [4], but many businesses report their sustainability to improve

Exploring the role of FDI in enhancing the entrepreneurial activity in Europe: a panel data analysis

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Abstract This paper explores the impact of foreign direct investment (FDI) on the entrepreneurial activity in 16 European countries. By using Global Entrepreneurship Monitor (GEM) data, which enables the distinction necessity-driven vs. opportunity-driven entrepreneurs, we assess the influence of both inward and outward FDI on the entrepreneurial activity during the time span 2005–2012. We resort to a static, as well as to a dynamic panel data analysis. Our findings highlight the fact that the FDI has no clear influence on the total entrepreneurial activity, or on the established business ownership rate. Nevertheless, our results clearly state that both inward and outward FDI positively influences the necessity-driven entrepreneurs, while having a negative impact on the opportunity-driven entrepreneurs. The results prove to be robust regarding the use of a fixed and random effects panel model, two stages least square (2SLS) model, as well as the use of a system-Generalized Method of Moments (system-GMM) approach.

Keywords Entrepreneurship · FDI · Panel data analysis · European countries · GEM statistics

JEL Classification L26 · F21 · C23

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Shadow economy, tax policies, institutional weakness and financial stability in selected OECD countries

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Abstract

We investigate the effect of taxation, corruption and financial stability on the shadow economy in 23 OECD countries. For this purpose, we use a panel framework and a difference-in-difference system-GMM model over the period 2001 to 2013. While the taxation effects are assessed through the corporate income tax and the average tax wedge, the banking sector Z-score computed based on four different models represents our proxy for the financial system stability. Our results show that only the average tax wedge by family has a positive influence on the shadow economy dynamics, whereas the effect of corporate income tax proves insignificant. Further, our findings indicate a negative influence of the financial stability on the shadow economy, but the significant effect depends on how the Z-score is calculated. Finally, the corruption perception positively impacts the shadow economy dynamics. All in all, our outcomes support the idea that excessive tax burden, financial instability and institutional weaknesses range among the factors influencing the shadow economy.


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Firm-level investment in the extractive industry from CEE countries: the role of macroeconomic uncertainty and internal conditions

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Abstract This paper investigates the impact of external and internal conditions on firms' investment in CEE countries, applying a panel data analysis, over the time-span 2008–2014. We use AMADEUS statistics for 412 companies and we focus on the extractive industry. The external conditions are associated with the macroeconomic uncertainty related to the economic growth and price level, while for the internal conditions we have retained as explanatory variables the leverage and liquidity ratios. The firms' investment dynamics is computed as the growth rate of fixed assets. Our results obtained using static and dynamic estimators, show that both external and internal conditions influence the firms' investment decision. The inflation uncertainty has a positive and significant impact on investment, providing evidence in the favor of the growth-option theory. The liquidity has a positive and significant influence, while the impact of the leverage and economic growth uncertainty is significant only under the dynamic specification. Our results are robust under different specifications of macroeconomic uncertainty and sample structure.

Keywords Firm investment · Extractive industries · Macroeconomic uncertainty · Leverage · Liquidity · CEE countries

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The Comparative Analysis of the Innovation Level for the Entrepreneurial Education

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Abstract. The paper makes a comparative analysis, regarding the offer of facilitators for entrepreneurship education in a region of Central and Eastern Europe (Romania, Bulgaria, Hungary, Serbia), using a model that is starting from Kano’s model of satisfaction, the five levels of inventiveness proposed by Altshuler, and the activities and product/services degree of ideality, a methodology for the assessment of the innovation level, in general, and of the entrepreneurship education in particular. In order to sustain the practicability of the proposed methodology, the research includes a case study about innovation level for the activities of the main facilitators for entrepreneurship education in Romania, and a comparative analysis between Romania and Bulgaria, Hungary and Serbia.

Keywords: Education, Entrepreneurship, Innovation.

1 Introduction

This paper sustains that the entrepreneurship facilitators and their offer in the field of entrepreneurship education must to respond to the new economic context arising starting from few years ago because of the subsequent global recession and financial crisis. This new context has profound implications to the psychological, social, economic, cultural and also educational level because it changes the influences and in the same time challenges the intellectual assumptions of entrepreneurship [2].

The entrepreneurship education is influenced by economic and market driven changes, learners’ expectations, government policy, changing technology, ethic and cultural changes etc. (see the Figure 1[9]).

These structural and attitudinal changes calling for better entrepreneurial skills and abilities for dealing with an uncertain future and current challenges, therefore educational institutions including universities have to reconsider their role as promoters of entrepreneurship.

In this new era the role of education is to shape ideas of what it means to be an entrepreneur, not to promote an ideology of entrepreneurship, and to create critical awareness that contributes to the accountability of the entrepreneurs to society.

In the same time the special challenge of entrepreneurship education is in the facilitation of learning to support the entrepreneurial process [2].

Risk Management and an approach for introducing functional safety in the development of automotive E/E systems

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Abstract

In the context of sustainable development, functional safety research in automotive industry is very important. Functional safety proves to be one of the key issues of future automotive development especially taking into account the technological advances. The technological complexity of the software content and the implementation of various concepts, determines an increased risk of introducing potential faults leading to malfunctions of the E/E systems. So automotive vehicle manufacturers and suppliers are taking steps to implement ISO 26262 to avoid the risk of losing their competitive edge. This paper aims to be a support for the first introduction in the development of products and processes compliant with ISO 26262 requirements.

Keywords: automotive E/E systems, ISO 26262, functional safety, systems engineering, safety requirements.

Introduction

Worldwide there is evidence that there are approximately 1.3 million deaths / year due to road traffic. So automotive industry is under pressure to deliver new and improved systems for the safety of vehicles, ranging from airbag systems to extremely complex systems advanced driver assistance with prediction and accident avoidance capabilities (Moraru et al., 2014; Becker et al., 2017). From this need arose ISO 26262 (ISO 26262, 2011) as an adaptation of the generic standard IEC 61508. ISO 26262 is the standard for functional safety applications in road vehicles. The functional safety standard ISO 26262 is not intended to be used only for the systems related to safety of the vehicles but for all the E/E systems of a vehicle that could subject the vehicle occupants, other road users, pedestrians and vehicle technicians to unreasonable risk due to a malfunction. The implementation of this standard is complex and affects the entire product life-cycle management (Mauborgne et al., 2016). This standard provides requirements to perform functional safety assessments and provides automotive-specific analysis methods to identify the automotive safety integrity level. In literature it is found that “ISO 26262 is considered to represent the “state of the art” for the development of vehicle electronic systems, specifically of safety relevant systems in passenger vehicles (Ward D. et al., 2013). It is an important standard for

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Education for Sustainability: Current Status, Prospects, and
Directions

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Abstract

Sustainability is a complex concept that is addressed by most companies, and is the direction of their development. Culture and education for sustainable development must start from higher education. At the level of higher education, the presence of sustainability subjects was mainly assessed in the curricula of study and also the understanding of the concept among students. In Romania these studies are not defined in depth. Also a comparative analysis of students' knowledge and understanding of the concept in business (after graduating higher education) was not made.

The purpose of this paper is to highlight the current level of education for students and the business environment on the sustainability principles. The first objective of this paper was to review and present the previous research on ESD. The second objective was to identify and assess the current level of ESD in Romania.

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Keywords: higher education, sustainable development, behavior change, attitude



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STUDY REGARDING INNOVATION AND ENTREPRENEURSHIP IN ROMANIAN SMEs

Tamasila, M.; Mocan, M.L. & Taucean, I.M.

Abstract: *The paper presents and analyzes the results of a study realized at the national level regarding the degree of innovation in Romanian SMEs. The study was realized on a representative sample of SMEs from different activity sectors (such as industry, construction, service).*

The main objectives of this analysis are:

- *identification of activity domains that have a high level of innovation and those that have innovation potential;*
- *identification of the problems with which Romanian SMEs deals in innovation activity;*
- *identification of the degree of preoccupation for innovative activity, products and processes.*

Key words: productivity, entrepreneurship, SME, benchmarking, IT

1. INTRODUCTION

Innovation consists of the successful production, assimilation and exploitation of novelty in the economic and social spheres. Lisbon strategy, launched in 2000, aims to make the European Union the world's most competitive and dynamic economy by 2010 [1].

Together with the Green Paper on entrepreneurship and the Communication on industrial policy in an enlarged Europe, it plays a part in the development of an enterprise policy to foster the competitiveness of companies and economic growth. Despite some promising results revealed by the 2001 and 2002 innovation scoreboards, the EU still lags far behind the USA and Japan.

The enlargement of the European Union calls for specific action to be taken. People in the newly members (such as Romania) have often had to display a capacity for entrepreneurship in adapting to the transformation of their economies. Although the problems encountered in these countries and in the European Union Member States are often identical, particular attention will nonetheless need to be paid to building up, adapting and installing appropriate financial procedures.

2. METHODOLOGY

The qualitative studies consist of collecting and analyzing the elements which are basis of explaining the opinions, motivations and behaviors of individuals involved in the studied issue.

We used a direct method of study, based on obtaining directly the information from the individuals involved in this study.

The survey is an investigation done in order to find out the opinions of a given population, by interrogating a limited number of its members (a sample).

The main stages of making a qualitative study by survey are:

1. *Making up the sample;*
2. *Determining the sample size;*
3. *Drawing up the questionnaire;*
4. *Administering the questionnaire;*
5. *Processing and analyzing the data;*
6. *Drawing up the synthesis report.*

For determining the sample size, formula (1) was utilized:

$$n = t^2 \cdot p \cdot (1 - p) \cdot \frac{100}{\Delta\omega^2} \quad (1)$$

THE ROAD TO ENTREPRENEURIAL SUCCESS: ENTREPRENEURIAL CHARACTERISTICS VS. SOCIAL RESPONSIBILITY

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Abstract

Purpose – *The purpose of the paper is to analyze the compatibility between the entrepreneurial activities and the CSR practices, in order to enhance the entrepreneurial success.*

Methodology/approach – *We resort to a theoretical approach, investigating the characteristics of a wide range of CSR and entrepreneurial models, while searching for common elements.*

Findings – *The research suggests that the compatibility between the CSR practices and the entrepreneurs' attributes is high. Equally important, the focus should be on profitability issues because the implementation of CSR practices by SME can be made only if the trade-off between social responsibility and economic responsibility is avoided.*

Research limitations/implications – *We sketch a theoretical explanation for the link between entrepreneurship and the CSR, while the real perception of entrepreneurs can be different. That is why an empirical investigation performed starting from the presented models will validate our intuition.*

Practical implications – *Even though the CSR agenda has been intensively discussed by the MNC, the small-business implication is poorly assessed. In taking up this challenge, we show that the adoption of CSR practices by entrepreneurs brings benefits in terms of profitability and social relationships.*

Originality/value – *Whilst the CSR is important for any business, the previous studies did not directly make the link between CSR practices and entrepreneurial activities. Starting from a different line of reasoning, we compare the similarities of the CSR and entrepreneurial models, revealing entrepreneurial characteristics which recommend the SME to adopt CSR practices.*

Key words: *Entrepreneurship, Social Responsibility, Theoretical models.*

Introduction

Entrepreneurship has been for a considerable time an important research field among scientists and practitioners. Some reasons supporting this prolonged and heightened interest in entrepreneurship are: the entrepreneurial activity revitalizes stagnated economies, represents a solution for unemployment problems, is a potential catalyst and incubator for technological progress, product and market innovation (Mueller and Thomas, 2000),

AN ENHANCED MODEL TO STUDY ENTREPRENEURIAL INTENTION IN HIGHER EDUCATION

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Key words: entrepreneurial intention; higher education; questionnaire; statistical analysis; hierarchical regression analysis



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Abstract: *The objectives of the research presented in this paper includes: the perception upon education, the opinion on education process in entrepreneurial context, the perception of entrepreneurial phenomenon. This research has been directed on two routes: for license and master students. We have opted for collecting the necessary data based on investigation, using questionnaires. The question to which we've searched answer for was: Intention to become an entrepreneur, to initiate a business it is, or not, influenced a priori by educational process? We propose for confirmation or rejection, two hypotheses that form the basis of the conceptual research model. In order to further verify the two hypotheses, a hierarchical regression analysis was performed, with the assistance of three models.*

1. INTRODUCTION

Entrepreneurial intention is defined very pragmatic in the literature [1], as being the search for information that may be used to create new business. In the same context, Choo and Wong [2] and other authors argues that personal commitment to become an entrepreneur, to find a business, is actually the critical/key dimension of this search with significant impact on shaping entrepreneurial intention.

Intention is otherwise considered to be the only and the best predictor of behavior [3], individuals with plans to start new business finding their place much better in the entrepreneurial phenomenon in comparison with the persons who lack initiative. Therefore entrepreneurial intention may be considered essential in the case of studying and understanding entrepreneurial dynamics, because intention is the one which determines initial key characteristics for the new organizations [1] [4] [5].

In the last period there have been many advances regarding the study of entrepreneurial intention, vast majority of those being based on cognitive psychology principles, emphasizing the importance of cognition in the development process of the entrepreneurial intention. This way have been highlighted, on the one hand, the role and the importance of cognitive variables in the entrepreneurial process [6] and on the other hand, it had reached the conclusion that studying cognitive processes involved in developing entrepreneurial intentions could be made on the basis of some models [7] [8]. These models offer the possibility for studying correlations between variables like the perceived feasibility, entrepreneurial experience, perceived utility, entrepreneurial intention etc [9] [10]. One of the findings which are

important to our research, obtained as a result of empirical testing of cognitive entrepreneurial models, is that entrepreneurial education is an important factor of influence in the process of cognition of feasibility and associated utility with the capacity to become an entrepreneur [11].

Even if there have been made important progresses, as regards studying entrepreneurial phenomenon, there are still many "unsolved mysteries", one of the study suggesting as possible emergent axes of future researches, the following three questions [12]:

- Why some people choose to become entrepreneurs and others do not?
- Why only certain people recognize opportunities for new products and services that can be profitable and others do not?
- Why some entrepreneurs have so much success in comparison to others?

We believe that the answers to these questions can be found by focusing our research on two major axes of entrepreneurial phenomenon:

- Influence factors (individuals, socials and environmental)
- Entrepreneurial characteristics, considered as a group of variables, identifying and testing correlations between them.

Therefore, in the first instance, the entrepreneurial intention, according to the social factors model, is conditioned by influence factors such as:

- Social individual, such as: personal preparation, career stage, family experience [13], gained life experience, as well as the growth medium [14];
- Contextual, environmental, such as: taxes level, career opportunities synchronization, social environment