



TECHNICAL UNIVERSITY OF CLUJ-NAPOCA

ACTA TECHNICA NAPOCENSIS

Series: Applied Mathematics, Mechanics, and Engineering  
Vol. 69, Issue I, March, 2026

## BUSINESS MODELS SUPPORTING STUDENT'S INTENTIONS FROM BULGARIA AND ROMANIA TO HAVE FAMILY BUSINESSES

Matei TAMASILĂ, Daniel PAVLOV, Violeta YANKOLOVA-ALI, Svilena RUSKOVA,  
Ilie Mihai TĂUCEAN, Andra DIACONESCU

***Abstract:** Over the past 15 years, the Entrepreneurship Centers of the University of Ruse "Angel Kanchev" (Bulgaria) and Politehnica University Timisoara (Romania) have been researching the essence of the business model and its diverse application in the development of new business ideas and business plans. The purpose of this research is to present the importance of the business model in the pre-start stage when students from Bulgaria and Romania consider the possibility of creating their own family businesses. A specific comparison was also conducted among students from Romania and Bulgaria within the framework of the international academic network INTERGEN, to verify the research subject of this publication.*

***Keywords:** Family entrepreneurship, business models, Bulgaria, Romania.*

### 1. INTRODUCTION

As 2020 commenced, the global community encountered an unprecedented and formidable pathogenic threat, COVID-19. Also, at the beginning of 2022, the Russian - Ukrainian conflict created new challenges for European companies and further hindered their economic development. Therefore, of recent global events millions of robust enterprises are grappling with significant liquidity challenges stemming from their enforced shutdowns. These companies, once bustling with activity and economic contribution, are now faced with the daunting reality of disrupted cash flow, making it increasingly difficult to cover operational costs, meet payroll, and fulfill financial obligations. The forced closure of numerous industries has led to a ripple effect, impacting not only the businesses themselves but also their employees, suppliers, and the broader economy. For family businesses, the risks are even greater, as many families depend on these incomes for their livelihoods. A significant problem facing the management of family businesses today is their survival and growth amid a multifaceted economic crisis. Starting a family business

under such challenging external conditions can be particularly difficult for an average family in Bulgaria and Romania. It is essential to understand both the external environment and the inner workings of the family business, as well as the collaboration among family members. A useful tool for analysis in the pre-launch phase is the "business model." This tool can assist entrepreneurs in developing and refining various scenarios to respond effectively to different opportunities and threats. The aim of this research is to present the importance of the "business model" in the pre-start stage when students from Bulgaria and Romania consider the possibility of creating their own family businesses.

The primary objectives detailed in the paper encompass a range of specific tasks:

- To provide a comprehensive literature review on key aspects of the business model;
- To emphasize the significance of the educational process in supporting entrepreneurs;
- To presents findings from a comparative survey conducted among students from two universities regarding their intentions towards family businesses: Politehnica

University Timisoara (UPT) and the University of Ruse “Angel Kanchev” (URAK). The data was generated because of both universities' participation in the international academic network INTERGEN.

Our analyses could be useful to various stakeholders dealing with family entrepreneurship, such as: academics and scientists in business models and other managerial tools; student entrepreneurs with intentions to involve their relatives in some new family businesses; business incubators with local, national or international sources of private or public funding; investors and business angels, who search to establish business relations with some new entrepreneurs.

## 2. BENEFITS OF BUSINESS MODELS

The fundamental for any business model is the development of a business idea. There are various definitions of “business idea”. For the purposes of this study, we assume the following one - a business idea is an intention for some actions that generate income. Since the business idea is generated by the individual and implemented through an economic system (for example, a company), the above definition can be expanded as follows: A business idea is an intention of an individual for actions in a certain economic system with the aim of generating income [1].

A business idea can be implemented in a variety of scenarios in accordance with the specific environment in each region. Even in one region, the business idea could be realized in different ways. Therefore, the entrepreneurs need a model, which gives them a good level of understanding about these scenarios. One of the appropriate solutions for the entrepreneur is to use a template of a business plan with specific analyses and planned activities according to the regional socio-economic characteristics and environmental features. In 2016, Tim Berry outlines some of the main mistakes when preparing a business plan [2]. In 2024, AlSarah gives a good understanding about the business plan elements [3]. According to Pereira et al. (2024), a business plan can be a crucial guide for directing business growth. It helps managers reduce risks and achieve their objectives more

effectively. Additionally, there are many other publications related to business plan theory [4].

In our opinion a business plan is created for a particular company at a specific time and location to facilitate the implementation of a specific business idea. This means that if other entrepreneurs want to prepare their business plans, each one must consider the unique environment of their own business and circumstances. But many entrepreneurs first try to understand how one business activity is organized despite of the place it is implemented. Thanks to the Osterwalder business model canvas [5] the entrepreneurs can share a knowledge of how to develop and implement their business ideas in the pre-starting stage of their preparation. Aini (2025) have used it to develop a green business model canvas [6], while other authors discuss eco-canvas business models [7].

Since 2011 the Entrepreneurship Center of the University of Ruse “Angel Kanchev” have used this business model canvas to help students in the pre-starting stage to develop their business ideas in a more pragmatic way. First, the students elaborate a basic business model, analyzing the interdependence among all nine elements. As a second step students generate a change in the environment and they develop a second business model of the same business idea, but within the new limitations and then a third business model in answer to the new opportunities. Some of the students generate a fourth business model combining some of the limitations and some of the opportunities.

The advantage of the business model is that every next student can read the business models of the previous students and adapt them to the new environment with few changes, if necessary. Thus, the business model becomes transferable. In contrast, a business plan is non-transferable, because it describes the specifics of entrepreneurs in a particular place and time.

In 2012 some of these scientific achievements were published by Pavlov [8] based on heavy joint research in benefit to a student with intentions to start pellet production for energy purposes. The first business model was based on the precondition that there will be a full-scale production line with capacity to work 24 hours 7 days per week. Due to financial limitations, we

develop the second business model to be with much less production capacity, but better involvement of some family members. The third business model was based on a mobile pelletizer. All these changes were done within two limitations – financial capacity and technological expertise of the entrepreneur.

Students developed business models mostly for production of goods; others are for business services. An important moment in all business models is to involve some of the relatives, too, especially after 2018 when the international academic network of INTERGEN was established and then we introduced the third limitation – the business model to give a good understanding how some relatives are integrated in their business ideas (next to the previously mentioned two limitation – financial capacity and technological expertise).

The idea behind INTERGEN is to help different generations to have business relations and keep family ties. The classic INTERGEN example for this interaction is:

- The grandparents produce grapes;
- The parents produce wine (including the grapes of their parents);
- The children create an online shop, and they also sell the grapes and the wine of their relatives.

This example illustrates how every generation is both independent and integrated. Based on business model canvas, we help students to organize their business ideas and keep family linkages. A very good example is the case of Steliana and Nikola, who have graduated the Master program “Entrepreneurship and Innovations” at the Faculty of Business and Management. In their case:

- The grandparents have a dairy farm in the village of Pisanets, Ruse region. It is in a rural area, with clean nature. The cows are fed in a healthy environment, and their milk is of high quality.
- The second generation (the father) adds a dairy to the dairy farm. This industrial activity allows the family to produce high-quality cheese and yellow cheese, as well as Bulgarian yogurt. The products are distinguished by their high quality, because

the raw material is of proven origin and quality.

The third generation (the grandchildren - Steliyana and her husband Nikola) set up a grocery store in the central part of the city of Ruse. There, they sell dairy products produced by the other two generations. Nikola and Steliyana rely on high quality and have a long-term client. Over the years, their store has also received food products from other manufacturers, with Nikola pursuing a ruthless policy of guaranteeing the quality of the products supplied. The three generations help each other in their work and soon another family member - Dimitrichka, who is Stiliyana's sister, joins them.

Developing a business model for interaction between the three generations turns out to be a key moment in the preparation of their business. Their well-organized relationships create lasting foundations for sustainability. Steliyana and Nikola are already parents of two children, through whom the foundations are laid for the integration of the fourth generation after a certain time.

During the training at the University of Ruse, cases are also considered in which students want to have a completely independent business, without the participation of other relatives. An important question for the INTERGEN academic network is how much students would like to interact with their relatives. Some answers are presented in the next section of this work.

### 3. RESEARCH METHODOLOGY

Kostadinova et al., [9] argue that students have a good understanding about sustainability from Circular Economy point of view. Other scientists like Silva and Aflaki [10] consider that firms are more sustainable in case they are family businesses. Therefore, we give special attention to the students’ intentions to integrate some of their family members into joint business activities.

As a first step, we define the research problem for this article – *in the pre-starting stage students don’t give enough importance of*

their relatives in the elaboration of their business models.

As a second step, we'll define the subject of our research - *the sustainability of the family firms depends on the intentions of the family members to be integrated into the family businesses.*

As a third step we will define two hypotheses, which help us to check the research subject:

Hypothesis 1: Students are informed about good practices of intergenerational family businesses.

Hypothesis 2: Students want to keep their family businesses.

We will check the three hypotheses on the base of a survey among students in Politehnica University Timisoara (Romania) and the University of Ruse "Angel Kanchev" (Bulgaria). The survey has been done by a standardized questionnaire, which had been elaborated in the INTERGEN international academic network by Bakracheva [11]. The students responded by e-mail or Messenger, filling the questionnaire in a Google form. For this article we take the responds from the third wave, which took place in 2023 and 2024.

We will check Hypothesis 1 by the responds to statement №35 „I know examples for successful intergeneration family businesses in my country, involving at least two generations “.

We will check Hypothesis 2 by the responds to statement №37 “I would like to learn more how to interact with my relatives when I start some neoclassic intergeneration family business with them (INTERGEN)”.

The answers are rated using the Likert scale, where: 1-No; 2-Rather No; 3-N/A; 4-Rather Yes; 5-YES. The responds are included in a database in MS Excel format with filters to create different statistical analyses.

#### 4. RESULTS FROM THE SURVEY

We collected responses from 582 participants in Bulgaria and 304 in Romania. In Bulgaria, the demographic breakdown reveals that 77% of the respondents identify as female, while 23% identify as male. Conversely, in Romania, the gender distribution is more balanced, with 43% of the respondents identifying as female and 57% as male. This data provides valuable insights into the gender perspectives represented

in each country. Table 1 and Fig.1 present the answers to Statement №35 „I know examples for successful intergeneration family businesses in my country, involving at least two generations “.

The findings reveal that at both universities surveyed, a greater number of students recognize examples of successful family businesses compared to those who do not. Specifically, more than 20% of students in each group expressed uncertainty when asked about their familiarity with such examples, indicating a notable gap in awareness or knowledge regarding this topic. This uncertainty may suggest the need for further education and resources related to intergenerational family business success stories.

Table 1

**Responds to Statement №35 „I know examples for successful intergeneration family businesses in my country, involving at least two generations “.**

HEI	No	Ra No	N/A	Ra Yes	Yes
URAK	13,2%	11,7%	20,8%	16,2%	38,1%
UPT	17,4%	13,5%	25,7%	21,7%	21,7%

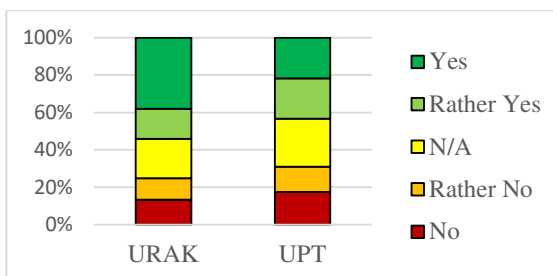


Fig. 1. Responds to Statement 35

Table 2

**Responds to Statement №37 “I would like to learn more how to interact with my relatives when I start some neoclassic intergeneration family business with them (INTERGEN)”**

HEI	No	Ra No	N/A	Ra Yes	Yes
URAK	11,2%	9,8%	21,8%	17,7%	39,5%
UPT	15,8%	13,2%	29,9%	23,4%	17,8%

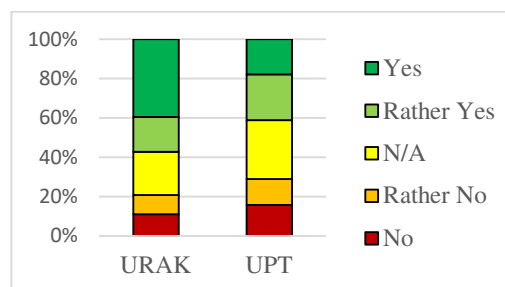


Fig. 2. Responds to Statement 37

The responses to the second statement reveal that a significant number of students are eager to acquire more knowledge and skills related to effectively engaging with their relatives as they embark on establishing an intergenerational family business. These students recognize the importance of familial collaboration and communication in ensuring the success of such enterprises, particularly as they navigate the complexities of combining traditional values with modern business practices. Based on the detailed responses we gathered, we can assert with confidence that both Hypothesis 1 and Hypothesis 2 have been validated. The students demonstrated a strong intent to engage with their family members regarding business matters, indicating a commitment to fostering familial relationships. This finding enriches our understanding of the research topic, suggesting that the sustainability and long-term success of family-owned firms are significantly influenced by the active involvement and intentions of family members to participate in the business. This connection emphasizes the vital role that interpersonal dynamics and shared ambitions within families play in driving the resilience and growth of family enterprises over time.

## 5. CONCLUSION

The answers of the students partly confirm our research problem for this article – “in the pre-starting stage students don’t give enough importance of their relatives in the elaboration of their business models”. We may propose two main recommendations, which to be contribution to the educational process in the two universities:

The professors provide students with a variety of examples of intergenerational family businesses to illustrate their significance in the economy and society. Additionally, they assign students the task of researching their own examples of such businesses, encouraging them to delve into both successful and failed enterprises. This assignment prompts students to analyze the factors that contribute to the longevity and success of these family-run businesses, as well as the challenges they face across generations. By doing so, students gain a

deeper understanding of the complexities involved in managing family enterprises and the lessons that can be learned from a diverse array of real-world scenarios.

An increasing number of students are creating business models that necessitate the involvement of their relatives in their entrepreneurial endeavors. This trend highlights the need for educators to receive specialized training in family business psychology. By gaining expertise in psychological strategies, these professors can better understand and facilitate effective collaboration among family members, which is crucial for the success of family-oriented businesses. In addition to psychological frameworks, they will also need to be equipped with economic tools and strategies that enable smoother integration of relatives into business, ensuring that both familial relationships and business objectives are harmoniously aligned.

## 6. ACKNOWLEDGEMENT

This study is financed by the Politehnica University of Timisoara, Project no. 14 / 02.02.2021 regarding "Increasing the quality of advanced scientific research in UPT"

This study is financed by the European Union-NextGenerationEU, through the National Recovery and Resilience Plan of the Republic of Bulgaria, project № BG-RRP-2.013-0001.

## 7. REFERENCES

- [1] Pavlov, D. *Business models for entrepreneurs*. Publisher Primax Bulgaria. ISBN:978-954-8675-11-6, 2011.
- [2] Berry, T. *Ten Most Common Business Plan Mistakes*. <https://timberly.com/tag/business-plan-mistakes/>, 2016
- [3] AlSarah, J. *Business Plan*. International Journal of Entrepreneurship and Project Management, 9(1), pp. 18–31, 2024.
- [4] Pereira, P.M., Santos, V., Marcão, R. *Theories of Business Plan for Strategic Internationalization*. In R. Marcão & V. Santos (Eds.), *Innovative and Diplomatic Methodologies in Economics, Management,*

- and Government, pp. 227-256, IGI Global Scientific Publishing. 2024.
- [5] Osterwalder, A., Pigneur, Y. *Business Model Generation*. Published by John Wiley & Sons. ISBN: 978-0470-87641-1, 2010.
- [6] Aini, N. *Green business model canvas: a framework for sustainable business practice*. IOP Publishing Ltd, Conf. Ser.: Earth Environ. Sci. 1441 012029, 2025.
- [7] Cardoso, I., Valentine, W., Endowment, G., Kato-Cruz, E. *Business model canvas and ecocanvas: a comparative analysis*. Free Journal of Sustainability and Entrepreneurship. 9(3), pp. 16-37, ISSN: 2448-2889, 2024.
- [8] Pavlov, D. *Business models for pellet start-ups*. Project FNI11-FBM-02. Publisher Primaks, pp. 229-243. ISBN: 978-954-8675-26-0, 2012.
- [9] Kostadinova, I., Todorova, A., Ruskova, S., Tomovska Misoska, A., Letonja, M., Tomljanović, M. *Sustainability and the Circular Economy through the Eyes of Students: A Comparative Analysis among Bulgaria, North Macedonia, Slovenia and Croatia*. European Journal of Sustainable Development, 14(1), 1, 2025.
- [10] Silva, M., Aflaki, S. *Why are Family Businesses More Sustainable?* Operations management, February 2023, <https://www.hec.edu/en/why-are-family-businesses-more-sustainable>, 2023.
- [11] Bakracheva, M., Pavlov, D., Gudkov, A., Diaconescu, A., Kostov, A., Deneva, A., Kume, A., Wójcik-Karpacz, A., Zagorcheva, D., Zhelezova-Mindizova, D., Dedkova, E., Haska, E., Stanimirov, E., Strauti, G., Taucean, I., Jovanović, I., Karpacz, J., Ciurea, J., Rudawska, J., Ivascu, L., Milos, L., Venera, M., Sheresheva, M., Tamasila, M., Veličković, M., Damyanova, D., Demyen, S., Kume, V., Blazheva, V. *The intergenerational family businesses as a stress management instrument for entrepreneurs (Vol.1)*. Ruse (Bulgaria), Academic Publisher University of Ruse “Angel Kanchev”, p. 126, ISBN 978-954-712-794-4. <http://intergen-theory.eu/INTERGEN-BOOK-1.pdf>, 2020.

### **Modele de afaceri în sprijinul intențiilor studenților din Bulgaria și România de a avea afaceri de familie**

De-a lungul ultimilor 15 ani, Centrele de Antreprenoriat ale Universității din Ruse „Angel Kanchev” (Bulgaria) și Universității Politehnica Timișoara (România) au cercetat esența modelului de afaceri și aplicarea diversă a acestuia în dezvoltarea de noi idei de afaceri și planuri de afaceri. Scopul acestui articol este de a prezenta importanța modelului de afaceri în stadiul de pre-start, atunci când studenții din Bulgaria și România iau în considerare posibilitatea de a-și crea propriile afaceri de familie. O comparație specifică a fost efectuată și între studenții din România și Bulgaria în cadrul rețelei academice internaționale INTERGEN, pentru a verifica tema de cercetare a acestui articol.

**Matei TAMASILĂ**, Professor, PhD. Habil., Politehnica University Timisoara, Research Center in Engineering and Management, [matei.tamasila@upt.ro](mailto:matei.tamasila@upt.ro).

**Daniel Yordanov PAVLOV**, Assoc. Prof., PhD, University of Ruse “Angel Kanchev”, Department of Management and Social Activities, [dpavlov@uni-ruse.bg](mailto:dpavlov@uni-ruse.bg), +359884343132.

**Violeta Valentinova YANKOLOVA-ALI**, PhD candidate, University of Ruse “Angel Kanchev”, Department of Management and Social Activities, [vyankulova@uni-ruse.bg](mailto:vyankulova@uni-ruse.bg), +359884343132.

**Svilena Svilenova RUSKOVA**, Assoc. Prof., PhD, University of Ruse “Angel Kanchev”, Department of Management and Social Activities, [sruskova@uni-ruse.bg](mailto:sruskova@uni-ruse.bg), +359884343132.

**Ilie Mihai TAUCEAN**, Assoc. Prof., PhD, Politehnica University Timisoara, Research Center in Engineering and Management, [ilie.taucean@upt.ro](mailto:ilie.taucean@upt.ro).

**Andra DIACONESCU**, Senior Lecturer, PhD, Politehnica University Timisoara, Research Center in Engineering and Management, [andra.diaconescu@upt.ro](mailto:andra.diaconescu@upt.ro).