

UNIVERSITY BUSINESS MODELS IN CRISIS MANAGEMENT

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Abstract: The aim of the article is to present key features of the business model as a mental construction and to summarise successful practices of universities around the world that have implemented innovative management solutions to overcome crises. Osterwalder and Pigneur's concept of business model and its applicability to higher education are considered. Variants of business models of different universities are analysed and crisis management approaches are synthesised in a summary model, with special attention paid to practices during the Covid-19 Global Crisis. The peculiarities of the analysis of the strategic risk after external threats are considered. Special emphasis is put on reviewing of business models in the context of new constraints and disturbed balance of revenues and expenditures. Timely reassessment of the business model can be a transition from a reactive to a proactive strategy and protect the organisation, at least in part, from the effects of future crises.

Keywords: university business models, crisis management, strategies, Covid 19.

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Introduction

In recent years, the world has been in a continuous series of crises, the effects of which accumulate and cause organisations to redefine their way of working. The changes are drastic and many authors mention about fundamental change in management models. Higher education institutions

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are no exception since they have service users, communicate with partners and contractors and should take care of the balance between income and expenses cash flows.

Therefore, in times of change, the reassessment of business models becomes a priority. The business model is the short version of the strategic and operational intentions of a company or organisation. The model schematically describes the source of added value for customers, the way it is created and reaches consumers and what resources and partners the company will use in its business. Timely reassessment of the business model can be a transition from a reactive to a proactive strategy and protect the organisation, at least in part, from the effects of future crises.

The aim of the article is to present key features of the business model as a mental construction and to summarise successful practices of universities around the world that have implemented innovative management solutions to overcome crises.

As with all strategies, success depends to a large extent on the context, and in this sense no strategy is a panacea (one size fits all). However, good practises are always a source of ideas to be applied to the environment in Bulgaria. It is more than obvious that crises will accompany us continuously in the coming years. The knowledge and experience of the best will be the most valuable capital and the most important asset in overcoming the crisis.

1. Business model as a concept

Business models are a management tool that describes recurring issues for a group of organisations and provides a solution to these issues based on good practises in other organisations and companies. One of the popular business model approaches is that of Alexander Osterwalder and Yves Pigneur (Alexander Osterwalder & Yves Pigneur, 2010). It is in the form of a table and in a simple way describes the strategy of a company, without going into detail on the individual parts of the idea.

Osterwalder's first business models were developed for start-ups in the IT sector (start-ups), but gradually the tool entered all areas of activity,

incl. higher education. Although universities are not commercial organisations, they have all the necessary components of a business organisation and applying an innovative approach to analysis and planning can only improve the efficiency of their management.

Osterwalder and Pigneur's business model comprises 9 blocks, divided into several summarising parts.

Business model blocks	Question	Description
Value Propositions	What?	It gives an overall picture of the package of products and services of the organisation.
Customer Segments	To whom?	An organisation serves one or several Customer Segments.
Channels	How?	Value propositions are delivered to customers through communication, distribution and sales channels.
Customer Relationships	Why?	The relationship of the organisation with each customer segment
Key Resources	Which?	The assets required to deliver the value proposed
Key Activities	What?	Main activities without which the value proposed cannot be delivered. They are implemented through key resources.
Key Partnerships	With whom?	Contractors – external contractors, suppliers, etc.
Revenue Streams	How much?	The result from value propositions successfully offered to customers
Cost Structure	How much (from each group)?	Groups of costs required to deliver value

Source: Alexander Osterwalder & Yves Pigneur. (2010). Business Model Generation

Figure 1. Alexander Osterwalder and Yves Pigneur's business model

The business model presents a holistic picture of the management of companies and organisations. In the process of its creation, however, it is inevitably entered into a more comprehensive and in-depth analysis and the most relevant to the organisation characteristics in the individual blocks are displayed. This should be done with the participation of internal and external stakeholders in order to define in detail the key elements in the model.

2. Strategic risk analysis

Strategic risk analysis generally requires several steps: identification of the initial state (exposure) of the external and internal environment, identification and assessment of opportunities, and comparison and selection of options. (Montz, 2020)

The consulting company Gartner applies a more detailed list of actions in case of threats (Gartner, 2020):

1. Reassessment of the business model, paying priority attention to several main parts of the business model:

- customer segments and how they are affected by the crisis;
- what changes occur in the value supplied to customers, do they already have other needs;
- whether the organisation can offer the required value;
- what it needs itself to do it.

2. Identification of unknown quantities and determination of probable scenarios for occurrence. As difficult as this may be, at least the main variables can be outlined in an optimistic and pessimistic version.

3. A business impact analysis, forecasting the consequences of the crisis and developing recovery strategies. Potential loss scenarios need to be identified during the risk assessment. (Business impact analysis, 2020) Identifying and assessing the impact of the crisis on business is the basis for investing in recovery strategies and in preventing and mitigating the effects.

The analysis is carried out in several stages, in which it must be done an assessment of (Business impact analysis, 2020):

- sales and income that are lost;
- those that are only delayed;
- costs that have increased (e.g. because of overtime, outsourcing, speeding up payments, etc.);
- costs related to new regulations;
- penalties under contracts or missed benefits from losing agreed bonuses;
- consumer segments that are dissatisfied;
- business plans that are delayed.

Based on the detailed analysis, measures for overcoming are planned and organisational conditions for their implementation are created.

In essence, the business model allows for a qualitative analysis of the risk of change in the environment. However, this approach is not sufficiently justified, as qualitative methods take into account the loss of an adverse event, but assessments are often subjective and are not always a sufficient argument for making a decision. (Bomil Suh, Ingoo Han, 2003). Therefore, it is appropriate for the risk assessment in the individual parts of the business model to be accompanied by a classical quantitative risk analysis, assessing the level of threats, especially when they are external, and the probability of each of them.

Depending on the dynamics of environmental change, combinations of probability models can be applied to outline the forecast in a selected time period. Databases have already existed and research on operational risk management practices is being launched, and predictive models for demand and supply in various sectors are being developed during and after the recent global crises. Of particular interest are studies of behaviour during the Covid-19 pandemic, incl. change in attitudes to risk - risk appetite for taking or avoiding risk. (Ozgur Merih Araz, Tsan-Ming Choi, David L. Olson, F. Sibel Salman, 2020)

3. New business models during crises – what is changing for universities?

The Covid -19 global pandemic has posed new threats to universities at a time when structural problems at higher levels remain unresolved, incl. in Bulgaria. The combination of old and new factors of different nature further complicates the environment and is a real challenge for the management of higher education institutions.

The proposed changes in the components of the business model of higher education institutions are synthesized after a study of good practices of various universities around the world after the last two major crises – the global economic crisis 2008 – 2013 and during the Covid – 19 pandemic. The two crises differ in their scope and way of impact, but they post an

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external threat to universities and lessons learned from them can be used to develop future preventive strategies to act in similar circumstances.

According to research by the Organisation for Economic Co-operation and Development (OECD, 2020), in the context of blended learning (face-to-face and distance learning in various combinations) for an indefinite period of time and greatly reduced educational mobility during a pandemic, smaller regional universities with relatively good quality of education are expected to attract an increased flow of students. At the same time, there are increased expectations for further demand for vocational education and training, especially related to sectors that will be on the growth after the end of the pandemic. (Bogdanova, 2020)

The potential response of universities to the Covid-19 global crisis in the short and medium term is summarised in Table 1. It includes changes in all components of the model.

Changes in the value added in the short term are reduced to achieving continuity of the learning process (through a combination of face-to-face and distance learning), introduction of programmes related to improving environment opportunities, as well as new forms of knowledge exchange between universities and business – on the most current issues, incl. related to the pandemic, development of life-saving research, good practises related to the economy, etc. In the medium term, these changes should continue as each higher education institution chooses a direction related to its specifics, but the general trend is to develop new hybrid programmes with a multidisciplinary nature to meet the high demand for new business competencies.

With regard to customer segments, the most urgent task for universities is to make efforts to retain existing customer segments as much as possible. However, there is also a need for increased demand for new customer segments, and B2B contacts should have a high priority – for instance, through direct partnerships with companies to carry out custom trainings in a given field of practice. Such training D. A. Tsenov Academy of Economics applies to the training of insurers for several companies in the country, but it can be extended to other strategic contractors.

It can be summarised that there are two key trends in the new business models of universities: 1) flexibility in all components and 2)

integration of the individual components of the business model and search for a synergetic effect.

*Table 1.
Short-term and medium-term potential changes in the components of university business models*

Business model blocks	During Covid-19	Medium-term changes in the model
Value Propositions	Continuity of the learning process (through a combination of face-to-face and distance learning). Programmes related to improving employment opportunities. New forms of knowledge exchange between universities and business – on the most current issues, incl. related to pandemic, development of life-saving research, development of good practices related to the economy.	Introduction of new educational services – hybrid programmes, incl. with the participation of the practice. Differentiation strategy to achieve higher school recognition.
Customer Segments	Same as before the pandemic, but on a changed scale; reduced foreign students. Increased segment of vocational education and training.	Retaining the existing segments, intensifying the efforts for contact with the consumers. Search for new segments, for example the elderly people – training in basic skills. B2B – training of personnel for a given company (custom trainings).
Channels	Mostly indirect. New ways to distant recruit and enrol students.	Combination of channels, integration of channels.
Customer Relationships	Continuous communication with students, access to information. Programmes to support students at risk. Measures for students with low incomes. Search for opportunities for equal access for all, incl. marginalised groups.	Branding and Marketing. New sales models. Customer relationship management.

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Key Resources	New skills for teaching in a distance environment, for assessment. Capacity building for blended interactive learning and assessment.	New educational technologies. Interactive technological solutions.
Key Activities	Development of adequate scenarios, a vision for the future of university and action plans for different scenarios. Teacher training – for new teaching methods and assessment methods. Reducing the number of students in groups in order to ensure their safety. Measuring the effectiveness of post-pandemic training systems – by what criteria, how will the evaluation be done. Replacement of obsolete technological platforms. Adaptation of research activities (field work). Creating a virtual helpdesk.	Assessment of which activities will be redundant after the crisis. Implementation of technologies to reduce losses. Improving transparency – continuous access to information for all stakeholders.
Key Partnerships	Collaboration with other universities in overcoming regulatory problems in the sector. Better relationships with students' parents. Connecting with a suitable partner to overcome technical challenges. Rethinking the new possibilities of the created partner networks in the context of the circumstances.	Search for network effects. Partnerships with competitors.
Revenue Streams	Risk of: reduced public funding; reduced private financing (due to disrupted budgets of households and companies). Need to diversify funding sources.	Dynamic pricing strategies for individual target groups. Diversification of revenue sources. Service promotions. Rent instead of purchase.
Cost Structure	Investments in better internet connectivity. Cost for replacement of technological platforms. Renegotiation of rental costs (of sports and other facilities.) Adjustment of scholarships and other expenses.	Decide whether external services / supplies are more appropriate instead of own resources or staff. Sell assets when they are a burden. What does the organisation really need ?

As almost all crises are accompanied by deteriorating income flows and increasing financial uncertainty, the traditional recommendation to universities is to diversify their stakeholders, especially the target groups of students, which is expected to diversify the sources of income of higher education schools. A similar conclusion was made by researchers of the Italian higher education system after the great economic crisis of 2008 – 2013, outlining several potential new sources of revenue not used enough by state universities in Italy – alumni clubs and co-financing by business on the one hand and co-financing by service users (students), on the other hand. (Besana, 2015)

This approach is not new and is partially applied in other countries (Budi Mulyana, Arief Daryanto, Agus Purwito, 2018) depending on the circumstances and attitudes of customers to pay for some of the services provided. But since the households are also in crisis, it is a matter of seeking and acceptable compromise for both sides to redistribute the financial burden of education spending.

From the point of view of the business model, the part of the co-financing from the business is especially important, as it is individual for the individual higher schools and depends on the capacity of the university to accumulate funds for its various programmes, incl. related to research.

The submitted proposals for changing the business models should not be accepted mechanically. Their purpose is not to provoke imitation, but to emphasise the effectiveness of the organisation, to help overcome cognitive barriers in the process of innovation, which is especially important during transformational change. (Gerrit Remane, Andre Hanelt, Jan F. Tesch, Lutz M. Kolbe, 2017)

The implementation of the measures, whether proactive or reactive, requires serious organisational efforts for detailed planning with broad participation of external and internal stakeholders. The biggest role here is played by the leaders, who should manage the crisis and apply innovative approaches to solving it.

Conclusion

Research on business models has grown in recent years, with a number of authors offering more and more variations of innovative concepts and tools for developing new business models. (Gerrit Remane, Andre Hanelt, Jan F. Tesch, Lutz M. Kolbe, 2017) Many of the proposals overlap as far as the building blocks are similar in different sectors. However, the wealth of business models is in the differences between them, as the realities and circumstances are different and therefore one tool may not be suitable for all situations. This is especially relevant when we talk about risk management.

Undoubtedly, in the long run the pandemic crisis will disrupt the status quo in many sectors, incl. and in higher education. There will be a serious debate at many levels about how to teach and how to achieve quality in the face of current and potential future constraints. But whatever changes are made to the higher education system, universities must strive to preserve their values. This means ensuring “fair access, transparency, academic freedom, institutional autonomy and social responsibility.” (Scholars at Risk Network, 2017). This is the primary task of all participants in the process, in order for universities to remain a pillar of science, culture and the progress of society.

Bibliography

Alexander Osterwalder & Yves Pigneur. (2010). *Business Model Generation*.

Besana, A. (2015). Economics and Finance of the Italian University at Crisis Times . In *Investigaciones De Economía De La Educación, Número 10, Chapter 2: Management And Educational Planning*. Asociación de Economía de la Educación. Retrieved from <https://ideas.repec.org/s/aec/ieed10.html>

Bogdanova, M. (2020). University business models – before and after COVID 19. *VII International Scientific Conference "Evolution against*

Revolution or for Development Models". Ruse: Regional library "L. Karavelov".

- Bomil Suh, Ingoo Han. (2003, December). The IS risk analysis based on a business model. *Information & Management, Volume 41, Issue 2*, 149-158. doi:[https://doi.org/10.1016/S0378-7206\(03\)00044-2](https://doi.org/10.1016/S0378-7206(03)00044-2)
- Budi Mulyana, Arief Daryanto, Agus Purwito. (2018). Business Model Development Strategy of Padjadjaran University with Canvas Business Model Approach. *Asian Business Research Journal, Vol. 3, 1-8*. doi:DOI: 10.20448/journal.518.2018.31.1.8
- Business impact analysis. (2020, May 8). (O. w. Security, Compiler)
Retrieved from <https://www.ready.gov/business-impact-analysis>
- Gartner. (2020). Create a Resilient Business Model in the Face of COVID-19. Retrieved from <https://www.gartner.com/smarterwithgartner/create-a-resilient-business-model-in-the-face-of-covid-19/>
- Gerrit Remane, Andre Hanelt, Jan F. Tesch, Lutz M. Kolbe. (2017, January). The Business Model Pattern Database — A Tool For Systematic Business Model Innovation. (©. W. Ltd., Ed.) *International Journal of Innovation Management Vol. 21, No. 1*. doi:DOI:10.1142/S13639196175000491750004-1
- Montz, B. E. (2020, May 13). Risk management: Are there parallels between COVID19 and floods? *J Flood Risk Manag.* doi:10.1111/jfr3.12618
- OECD. (2020, April 28). Responding to Coronavirus: Back to school. Retrieved from <https://www.oecd-forum.org/badges/1420-tackling-covid-19/posts/responding-to-coronavirus-back-to-school>
- Ozgur Merih Araz, Tsan-Ming Choi, David L. Olson, F. Sibel Salman. (2020). Data Analytics for Operational Risk Management. Retrieved from https://www.researchgate.net/profile/OM_Araz/publication/339938737_Data_Analytics_for_Operational_Risk_Management/links/5e9379fa4585150839d95

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