

BASICS OF MARKETING SIMULATIONS – MARKSTRAT SIMULATOR

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Abstract:

Business simulations is a hot topic in higher education, as it aims to connect theory with practice and help students become familiar with the marketing activities carried out in an enterprise. This article aims to define the basic concepts of marketing simulations and to present the case of the Markstrat simulator, one of the most used strategy marketing simulators for students and professionals. The research methodology was based on a quantitative research method and a case study. The paper contributes to the deepening of the theoretical framework to better understand the marketing simulations field, in general, and to understand the Markstrat simulator, particularly. It also shows that in marketing simulations games students run virtual production companies and they will analyze the market, manage the elements of the marketing mix, and invest in research and development to get competitive advantages. The outcome of this paper provides a guidance tool for students, teachers, and professionals carrying on business simulations.

Keywords: *marketing, marketing simulations, Markstrat, simulator*

JEL Classification: *M31, M39*

1. Introduction

In the age of globalization, companies worldwide are competing in an increasingly turbulent environment (Toma and Marinescu, 2013; Toma and Marinescu, 2015). The use of simulation software is an innovative way of improving business and marketing education (Teichmann, et al., 2020; Schmuck, 2021). Business simulations are described in the literature as “software that simulates a company, where groups of participants have to make decisions in teamwork” (Schmuck, 2021, p. 556).

Over the years, many researchers have performed studies on marketing simulations and their effectiveness in business education (Wolfe, 1997; Vaidyanathan and Rochford, 1998), in general, and particularly in marketing (Brennan, et al., 2008; Gundala and Singh, 2016). The continuously developing technology results in easier-to-use simulations in higher education (Schmuck, 2021).

Markstrat was founded by Professor Jean-Claude Larréché and has been developed from 1974 to 1977 (Strat X Simulations, 2021). It is a software that can be used both in academic and executive education, and for a variety of courses like marketing simulations, strategic marketing, product planning and management, brand management, and advertising. Moreover, this is available in the business to consumer (B2C) - durable goods (Electronics), business to consumer (B2C) - consumer goods (Cosmetics), and business to business versions (Mechatronics) (INSEAD, 2021).

The aim of this paper is to define the basic concepts of marketing simulations and to present the case of the Markstrat simulator, one of the most used strategy marketing simulators for students and professionals. This research is based on a quantitative research method and a case study. The paper is structured as follows. The second section presents the research methodology. Results and discussion are displayed in the following part of the paper. The last section presents the conclusions, along with research limitations and perspectives.

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2. Research methodology

First of all, the authors studied the literature on marketing simulations and information about the Markstrat game. The authors selected this business simulator due to the following reasons:

- This game is widely known, and played in over 500 academic institutions, including 8 of the top 10 international business schools and 25 of the top 30 in the United States (Strat X Simulations, 2021);
- This software is used at the Marketing Simulations course for 3rd-year students from the Business Administration specialization at the Faculty of Business and Administration, the University of Bucharest (where all the authors are teaching various disciplines).

To reach the aims of the paper, the authors employed a quantitative research method and a case study. The information was obtained through desk research. The secondary data had been collected through the deployment of a widespread literature review from various sources, such as books and journals from the field of marketing. The documents were found in prestigious economic databases (Scopus, Web of Science, Science Direct, Google Scholar, and Emerald Insight).

Secondly, the information was synthesized, highlighting the aspects related to the marketing simulations in the context of the Markstrat game. Finally, the authors concluded the paper and emphasized the conclusions following the performed analysis.

3. Results and discussion

Products and tangible items are put on the market for acquisition, attention, or consumption, while services are intangible items, which arise from the output of one or more individuals (Corporate Finance Institute, 2021). In marketing, market, positioning and mix strategies should be investigated, mostly, for traded goods (Catana and Constantinescu, 2015; Catana, et al., 2020; Catana, 2021).

Academic education is compatible with the training system characteristic to companies because it emphasizes the needs imposed by the real markets (Marinescu and Toma, 2013) and countries have recognized the critical role played by higher education in economic development (Toma and Naruo, 2009; Barbu and Militaru, 2018). Thus, in marketing simulations games, students run virtual production companies and they will analyze the market, manage the elements of the marketing mix (product, price, distribution, and promotion), and invest in research and development to get competitive advantages. Moreover, they can play in teams and get improved their teamwork skills and collaborative learning (Zea, et al., 2015; Hubro Education, 2021).

Markstrat is a simulation game that offers students and professionals a platform to test strategic theories and make decisions regarding brand portfolio, segmentation, and positioning strategies (StratX Simulations, 2021).

To address different industry-specific challenges, Markstrat players must consider the economic variables. Markstrat can be configured so that to consider existing and emerging markets, product characteristics, customer segments, and distribution channels (Figure 1):

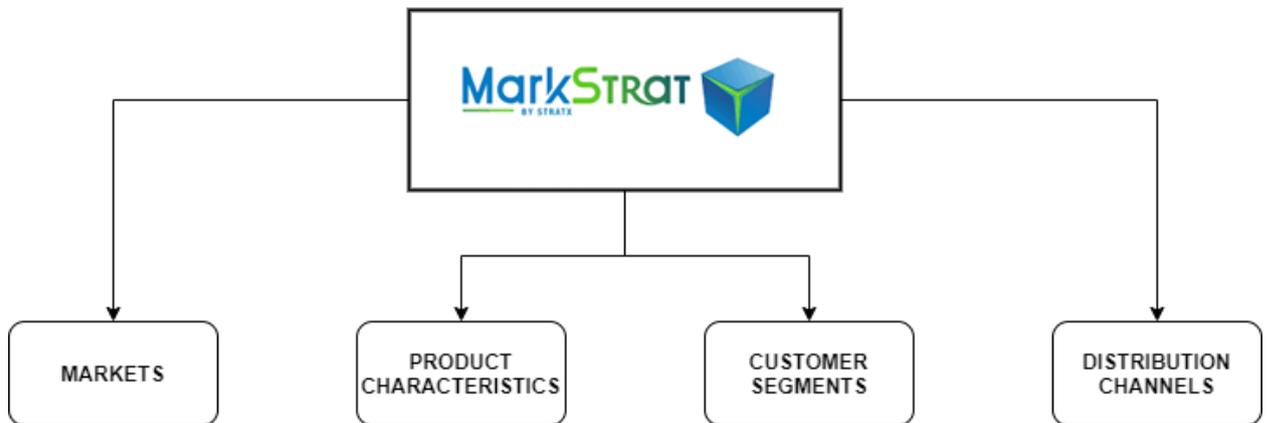


Figure 1. Economic Variables in Markstrat

For durable goods (Table no. 1), Sonite is the name for the existing market and Vodite is for the emerging market. Sonite’s products are characterized by processing power, display size, design index, battery life, and features, while Vodite’s by resolution, energy, efficiency, carbon footprint, connectivity, and apps. Sonite’s customer segments are explorers, shoppers, professionals, high earners, and savers, while Vodite’s are innovators, early adopters, and followers. All the durable goods are sold through specialty stores, mass merchandisers, and online stores (Strat X Simulations, 2021).

Table no. 1 – Durable goods

Markets	Product characteristics	Customer segments	Distribution channels
Sonite – existing market	Processing power	Explorers	Specialty stores
	Display size	Shoppers	Mass merchandisers
	Design index	Professionals	Online stores
	Battery life	High earners	
	Features	Savers	
Vodite – emerging market	Resolution	Innovators	Online stores
	Energy	Early adopters	
	Efficiency	Followers	
	Carbon footprint		
	Connectivity		
	Apps		

Clinites (skin care) is the name for the existing market and Nutrites (beauty care nutrition) is for the emerging market for consumer goods (Table no. 2). Clinites’s products are characterized by efficacy (beauty), safety, packaging, pleasure, and simplicity, while Nutrites by clinical benefit, nutrition, packaging, flavor, and variety. Clinites’s customer segments are high earners, affluent families, medium-income families, low-income families, and singles, while Nutrites’s are health conscious (innovators), families (adopters), and elderly (followers). The distribution channels for consumer goods are mass merchandisers (including e-grocers), specialized mass, specialty chains, and beauty portals (Larréché and Gatignon, 2017).

Table no. 2 – Consumer goods

Markets	Product characteristics	Customer segments	Distribution channels
Clinites (skin care) – existing market	Efficacy (beauty)	High earners	Mass merchandisers (including e-grocers)
	Safety	Affluent families	Specialized mass
	Packaging	Medium income families	Specialty chains
	Pleasure	Low-income families	Beauty portals
	Simplicity	Singles	
Nutrites (beauty care nutrition) – emerging market	Clinical benefit	Health-conscious (innovators)	Beauty portals
	Nutrition	Families (adopters)	
	Packaging	Elderly (followers)	
	Flavor		
	Variety		

For the business-to-business version of the soft (Table no. 3), the emerging market is represented by Squazols (electro mechanic devices) and the emerging market by Trigols (mechatronic devices). Squazols’s products are characterized by power, maximum pressure, servicing, mean time between failures (mtbf), and volume, while Trigols’s by accuracy, energy efficiency, robustness to hostile environment, maximum frequency, and weight. Public utilities, construction industry, oil industry, chemical industry, and manufacturing industry are the customer segments for Squazols, while space agencies (innovators), aircraft industries (adopters), and automotive industries (followers) for Trigols. Direct distribution, general line, and technical specialists are the distribution channels for business-to-business versions (Larréché and Gatignon, 2017).

Table no. 3 – Business-to-business

Markets	Product characteristics	Customer segments	Distribution channels
Squazols (electro mechanic devices) – existing market	Power	Public utilities	Direct distribution
	Maximum pressure	Construction industry	General line
	Servicing	Oil industry	Technical specialists
	Mean time between failures (mtbf)	Chemical industry	
	Volume	Manufacturing industry	
Trigols (mechatronic devices) – emerging market	Accuracy	Space agencies (innovators)	Technical specialists
	Energy efficiency	Aircraft industries (adopters)	
	Robustness to a hostile environment	Automotive industries (followers)	
	Maximum frequency		
	Weight		

Taking into consideration all markets, product characteristics, customer segments, and distribution channels, users better understand the specificity of the marketing mix (Gradinaru, et al., 2016; Catana and Toma, 2021; Catana and Toma, 2021) and the components of the sales process (Catana, 2019).

4. Conclusions

Marketing simulations is a hot topic in higher education, as it aims to connect theory with practice and help students become familiar with the marketing activities carried out in an enterprise. Over time, many researchers have performed studies on marketing simulations and their effectiveness in business education. This paper provides a theoretical framework to better understand the marketing simulations field, in general, and to understand the Markstrat simulator, particularly.

In this study, the authors examined the type of markets, product characteristics, customer segments, and distribution channels that are represented in the Markstrat simulator. The results of this paper can represent a starting point in the development of a guide for students, teachers, and professionals to better understand how to use this strategy marketing simulator.

In conclusion, there is a need for future studies related to the marketing simulations topic as well as on the simulators used. This should be sustained by increasing the interest of companies and higher education institutions in this field.

5. Bibliography

1. Barbu, A., Militaru, G., 2018. How Lifestyle, Professional and Financial Criteria Influence Students' Personal Vision to Become Entrepreneurs. Evidence from Romania. *"Ovidius" University Annals, Economic Sciences Series, XVIII (1)*, 278-283.
2. Brennan, R., Willetts, R., Vos, L., 2008. *Student experiences of the use of a marketing simulation game*, London: Middlesex University.
3. Catana, S.-A., 2019. A new approach to retail marketing - ways of service marketing. *SEA - Practical Application of Science*, 1, 75-77.
4. Catana, S., 2021. *Strategii de marketing in comertul cu amanuntul*. Bucharest: Editura Universitara.
5. Catana, S.-A., Constantinescu, V., 2015. Direct Marketing Strategy for "Coradrive" Service, Promoted by Cora Company. *International Conference on Marketing and Business Development Journal*, 1(1), 185-191.
6. Catana, S., Toma, S.-G., 2021. Marketing mix and corporate social responsibility in automotive industry - case study: Mazda Motor Corporation. *Annals of the "Constantin Brancusi" University of Targu Jiu*, 1, 205-209.
7. Catana, S., Toma, S.-G., 2021. Marketing Mix in Healthcare Services. *"Ovidius" University Annals, Economic Sciences Series*, 21(1), 485-489.
8. Catana, S., Toma, S.-G., Gradinaru, C., Iordache, A., 2020. The reflection of retail marketing strategies in advertising catalogues. *Manager Journal*, Issue 31, pp. 16-23.
9. Corporate Finance Institute, 2021. *Products and Services*. [online] Available at: <<https://corporatefinanceinstitute.com/resources/knowledge/other/products-and-services/>> [Accessed 15 November 2021].
10. Gradinaru, C., Toma, S.-G., Marinescu, P., 2016. Marketing Mix in Services. *"Ovidius" University Annals*, 1-4.
11. Gundala, R., Singh, M., 2016. Role of Simulations in Student Learning: A Case Study Using Marketing Simulation. *Journal of Educational Research and Innovation*, 5(2), 1-14.
12. Hubro Education, 2021. *Hubro Marketing Simulations*. [online] Available at: <<https://hubro.education/en/hubro-marketing-simulation>> [Accessed 4 November 2021].

13. INSEAD - The Business School for the World, 2021. *Marketing - Markstrat - A strategy marketing simulation.* [online] Available at: <<https://www.insead.edu/faculty-research/simulations/markstrat>> [Accessed 1 November 2021].
14. Larréché, J.-C., Gatignon, H., 2017. *Markstrat - Instructor's guide*, StratX Simulations.
15. Marinescu, P., Toma, S.-G., 2013. Training Programs - Training and Development Alternatives for Students. *Procedia Economic and Finance*, 6, 306-312.
16. Schmuck, R., 2021. *Education and training of manufacturing and supply chain processes using business simulation games.* 30th International Conference on Flexible Automation and Intelligent Manufacturing (FAIM2021), Athens, Greece.
17. Strat X Simulations, 2021. *Handbook-SM-B2C-DG.* [online] Available at: <http://www.stratxsimulations.com/latest_materials_markstrat_web/enu/Handbook-SM-B2C-DG/DocToHelpOutput/NetHelp/default.htm#!WordDocuments/voditeproducts.htm> [Accessed 5 November 2021].
18. Strat X Simulations, 2021. *Bringing learning concepts to life with simulations.* [online] Available at: <<https://web.stratxsimulations.com/about-stratx>> [Accessed 4 November 2021].
19. StratX Simulations, 2021. *Develop Successful Strategic Marketers.* [online] Available at: <<https://web.stratxsimulations.com/simulation/strategic-marketing-simulation>> [Accessed 4 November 2021].
20. Teichmann, M., Ullrich, A., Knost, D., N., G., 2020. Serious Games in Learning Factories: Perpetuating Knowledge in Learning Loops by Game-Based Learning. *Procedia Manufacturing*, 45, 259-264.
21. Toma, S.-G., Naruo, S., 2009. Quality assurance in the Japanese Universities. *Amfiteatru Economic Journal*, 11(26), 574-584.
22. Toma, S.-G., Marinescu, P., 2013. Global strategy: the case of Nissan Motor Company. *Procedia Economics and Finance*, 6, pp.418-423. [online] Available at: < HYPERLINK "<https://www.sciencedirect.com/science/article/pii/S2212567113001573>" \t "_blank" <https://www.sciencedirect.com/science/article/pii/S2212567113001573> > [Accessed 2 November 2021].
23. Toma, S.-G., Marinescu, P., 2015. Strategy and change. *Manager*, 21(1), pp.145-150. [online] Available at: < HYPERLINK "<http://manager.faa.ro/en/article/Strategy-and-Change~818.html>" \t "_blank" <http://manager.faa.ro/en/article/Strategy-and-Change~818.html> > [Accessed 1 November 2021].
24. Vaidyanathan, R., Rochford, L., 1998. An exploratory investigation of computer simulations, student preferences, and performance. *Journal of Education Business*, 73(3), 144-149.
25. Wolfe, J., 1997. The effectiveness of business games in strategic management course work. *Simulation & Gaming*, 28, 360-376.
26. Zea, N., Medina, N., Gutiérrez-Vela, F., López-Arcos, J., Paderewski, P., González-González, C. 2015. A Design Process for Balanced Educational Video Games with Collaborative Activities. *DYNA*, 82(193), 223-232.