



A practical approach to global competitive factors: achieving key success parameters in international business

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ABSTRACT

Multi-game simulations are the most widely used tools in international business and strategic management education. In Business Schools, all courses from Strategy to Finance are taught from case studies and books, using research results. But when managing a business, there is no way to learn the parts of the business from books by gaining experience in complete integrity. Company management competence requires practice in areas such as production, marketing, R & D, finance, operations and strategy. The simplest way to practice this in the learning process is through business simulations and multi-game applications. In the room, players are interested in the current national differences, including preferred ones, price sensitivity, production location, market growth, business environment and economic growth. Instructors follow which decisions will be highlighted in the course's planned learning objectives and guide preferences for students. We will explore the decisions and knowledge of CAPSIM Global DNA in a multi-game design. This article differs from other studies in that it is a study that puts forward the theory and application of a computerized representation simultaneously.

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1. Introduction

Simulations have long been a tool for managing improvement changes in organizations and creating a virtual reality for cause and effect modeling. It is therefore highly effective to provide insight into changing business processes in business environments and to help develop accurate estimates to show how changes in processes affect decision-making. In implementing these changes, teams are often set up to guide decisions. The expression "you cannot manage what you do not understand" is well known in the business world. Therefore, understanding strategy, management styles, people, and business areas

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are crucial tools for success in a complex and ever-changing business environment. If there was a way to achieve all these multifaceted layers of understanding, people would have found much greater success in their business careers. Simulations improve skills development, greater participation and learning of new techniques and concepts. Simulations give participants a much better understanding of how our business works and what they can do in their roles to have an impact on the outcome. (Keefe, Lang, Rumsey and True, 2016).

In the global competition environment, comprehensive information can be found in the books on business management. In fact, in recent books, business stories from known international companies are supported. However, it was not possible for a student to actually experience this environment, to be a decision maker in processes, to see the results of decisions, to endure the results of right or wrong decisions, and to be in a multivariate business life before simulation applications.

In this article, business strategies in a globally competitive environment are discussed with theoretical and simulation applications. In line with global competition strategies, we will explore the students' decisions and results in a multi-game simulation of CAPSIM Global DNA. This article differs from the other studies in that it is a study that demonstrates the theory and the application of a computer simulation simultaneously.

2. Literature review

There are also studies on the benefits of simulation applications and factors determining the success of companies and numerous studies on global competition. In these studies conducted in different sectors, the effects of competition on companies were measured. Yüksekbilgili & Özkeskin (2019) In this study, Porter's use of generic competition strategies model in the hotel sector was investigated; The factor analysis method was used with questionnaires and when they evaluated the factors that could create obstacles for a new company in the hospitality sector, the most preventive factor was the intensity of the competition among the existing enterprises.

The least influencing factor was low profit margins. Türk, Güler, & Yıldırım (2019) Strategic marketing planning for Torcu company by using swot analysis method is examined. It is stated from the annual reports that the company intends to realize the industrial structure that will make each product value-added in a way that meets the needs and needs of the consumer. In the internationalization decisions, Çoskun & Sancakturan (2019) examined which methods (competitive or collaborative) were adopted in supplier relations, and the traditional supplier relationship such as cost, quality and timely delivery came to the fore. In their study, Daehy, Krishnan, Alsaadi, & Alghamdi (2019) concluded that a statistical method provides a suitable method that helps ensure consumer satisfaction at the lowest possible cost by measuring the reliability ratio of each part of the system as well as the entire supply chain. In their study on learning, Nugent & Stoyanov (2019) examined how useful a financial simulation can be in strengthening the measured financial learning objectives, and stated that acquiring new information on understanding financial concepts is critical to the success of future students. Caruso (2019) explained what business simulations are, how they are used with their types, benefits, and constraints, and that business simulations help students practice critical thinking, make better decisions, and solve work problems and acquire workforce skills.

Toksari (2019) examined the necessity of enterprises that want to gain competitive advantage in their sectors and branding on a global level, to develop policies in line with the real-time marketing process with social media networks and to make a difference, and today's consumer needs and needs change rapidly. It has reached the conclusion that it is heading towards the periods in which they will try to find new marketing tactics. Grant (2016) stated that the primary objective in discovering the competitive advantage is to bring together the two sides of our analytical framework (the industrial environment and the firm) and to consider how competitive advantage positions are created and destroyed and to analyze opportunities for cost advantage and differentiation advantage. Dereli (2015) said that in the global competitive environment, organizational and managerial innovations are the key to success for companies, while technology, research and development activities significantly affect organizational structure and culture, and correct innovation management provides a competitive advantage. Huang, Dyerson, Wu, & Harindranath (2015) concluded that technological resources and talent positions increase sustainable competitive advantage.

These studies, the methods used in the studies, the location, period and data set of the studies and the conclusions reached in the studies are listed in the literature review table in Appendix 1.

3. Why simulation packs for managerial practices are necessary?

Business simulations help students acquire workforce skills by enabling them to practice critical thinking, make better decisions, and solve business problems. Business simulations are a powerful teaching tool and the framework maximizes the learning effect given the five main design considerations (Caruso, 2019). Financial simulations have the potential to enhance the student's ability to understand the basics of finance. Research that investigates the effectiveness of financial simulations and the best practices of distributing financial simulations in the research program may have a significant impact on students' learning. (Nuget, 2019).

In the field of international business and strategic management training, the most widely used business simulation games are browser-based multiplayer simulations. Student teams compete with each other by running multinational businesses over several game rounds, and each round represents one financial year. International business simulation games enable students to make decisions and receive immediate feedback in a risk-free environment. (Rogmans, 2016).

The supply of high quality gaming in line with the international business curriculum continues to increase. Trainers can now choose from multifunctional games related to international business, including CESIM's Global Challenge, Capsim's Global DNA, and Glo-bus marketed by McGraw-Hill. There are

also a variety of function-specific games in the fields of intercultural management and negotiation, international marketing and international financial management. A list of simulations is available on the AIB website. Most international business simulation games are available to undergraduate and graduate students and managers (Rogmans, 2016).

Company management competence can be achieved by working as separate disciplines in areas such as Finance, Marketing, Operations and Strategy. But business intelligence is gained through experience only. While the business life is constantly changing, the essence of managing a business remains the same. In Business Schools, all courses from Strategy to Finance are taught from case studies and books, using research results. But when managing a business, nothing can replace the learning of parts of a business by gaining experience in complete integrity.

The most widely used international business games can be regarded as both global strategy games and stone capstone "experiences. Various institutional functions are represented in the decision-making elements of the game. Typically, students need to make decisions about a company's product portfolio, pricing, advertising, production, R & D and financial structure. The international operating aspects of the games include the management of exchange rate fluctuations, trade barriers, different tax rates between countries, shipping costs and international cash management. Players should also deal with national differences in many aspects, including consumer preferences, price sensitivity, production costs, market growth rates, business climate and economic growth. Instructors should choose which decisions the course will be emphasized, negligible, or ignored in line with the planned learning objectives. (Rogmans, 2016).

3.1 General information about CAPSIM simulation application

Capsim Company Management Simulations is a global leader in business simulation technology and services designed to teach business intelligence in any learning environment. Capsim has since 1985 focused primarily on executive training and special simulation development. This simulation, which reached 3000 students in 1988, reached 100,000 students in 2003. Reaching 100,000 students annually in 2012, this training has reached its target of 1 million students annually since 2015 (www.capsim.com).

Since 1985, CAPSIM has created many business management simulations to develop participants' business intelligence, team building and critical thinking skills. Capsim Simulations are rich business simulations designed to teach teamwork, strategy, advanced business finance, cross-function collaboration, competitor analysis and tactics to manage a business with a focus on business. Your participants will face an integrated and rapidly developing scenario where their business intelligence is tested through modeling, analysis and strategic planning.

CAPSIM simulation program: Company Management Simulations nowadays provide experience for many of the following decisions in business life:

- *Organizing the management team, setting targets on behalf of business and departments, developing strategies and tactics to support these objectives,*
- *Following the competitors, conducting analyzes, improving inter-departmental integration,*
- *Designing and measuring new products, managing sales and marketing budgets,*
- *Determining human resources management and training, production planning, automation and quality management,*
- *Read and understand inventory control, financial statements and indicators,*
- *Financial resource management for business management, short and long term debt management, issuing and redeeming stocks and distributing dividends. (www.capsimturkey.com).*

Organizations continue to rely on the team's promises as key structural mechanisms for adapting and steering to increasingly complex environments. It is not surprising that the majority of business school courses use team projects to prepare students for a professional future full of teams. However, to be successful as a team member, students need to master a complex set of interpersonal skills that are not likely to be acquired as members of a team. Even in organizational behavior courses where teamwork is a key issue, students often learn teams rather than how to work effectively in a team. Instructors looking for ways to gain this teamwork often turn to assessment tools that enable student-centered peer assessment. Nevertheless, these tools often fail to provide students with the information they need to include both individual and team-level feedback that may be needed to make changes to teamwork behavior. Capsim's TeamMATE provides trainers with a powerful tool for improving individual teamwork skills and effective team performance (Rubin, 2017).

After completing the recognition phase, teams compete in the GLOBALDNA® simulation created by the Capsim Company. In this application, thanks to a realistic, engaging, hands-on learning experience, students discover why companies choose to compete internationally, and when they gain insight into multinational operations, they face their impact on different market conditions and strategies. Capsim states that learning objectives should enable students to understand strategic options outside an internal market, explore strategic complexities in cross-border operations, learn how regional currencies, taxation and regulatory issues affect decision-making, and explore the compliance of decisions made in each market. Provides an understanding of functions and corporate motivations for international business units and global competition (Keefe et al. 2016).

All teams are provided with the Global DNA ® Managers Guide, a guide detailing process steps to investigate, analyze, make decisions, and run simulation online, as well as simulation goals and company and industry data. The simulated company for each team competes in the portable genetic diagnostic test market. At the beginning of the simulation, all teams are equal in their balance sheets, income statements, resources, products (quantity and quality) and labor. In addition, no team company has sold products outside the US in the past; however, expansion opportunities are now being offered to the European and / or Asia-Pacific markets. To implement their strategies, marketing, research and development, production and finance departments must use the given company and industry data to make and manage decisions. As a learning mechanism, teams are given the opportunity to participate in a testing program designed to help them prepare for the GlobalDNA simulation experience. Students manage each of the four functional parts in the testing phase and are given a series of tasks to complete in an interactive environment of simulation (Keefe, Lang, Rumsey and True, 2016).

Teams first give each member commercial function roles and develop a strategy plan for eight decision rounds of simulation. Each week, teams meet through online media platforms to conduct research, analyze and make decisions (eg R & D investments, product design / development, sales staff, TQM, inventory, target markets, promotion, pricing, etc.) and as a result of weekly decisions with other teams; sales revenue, market share, ROI, ROE, share price etc. they compete with the results of the criteria. These decisions ultimately give the results sent to teams for analysis before making the next decisions (Keefe, et al. 2016).

This business simulation exercise explores the challenges and complexities of managing, deciding and executing business functions and units in an international business in new markets with regional consumer and competitive differences by exploring and analyzing opportunities in a global context in the context of new market development and expansion, and creating / implementing business strategy. help them understand. (Keefe, Lang, Rumsey and True, 2016).

The Capsim program initially creates a virtual competitive environment with more than one product and equal capacity, financial structure, market share and product for multiple companies operating in the same sector. In the simulation, each student or group of students can only see the data of their own company and make decisions of their own company. If they wish, students can make a division of labor among themselves and make separate decisions for R & D, production, marketing and finance departments. They can decide together on all of these sections if they wish. Each decision-making process is a set of activities covering a calendar year. After all students record their decisions for all departments, the administrator (the instructor of the course) makes the final registration process. The Capsim simulation program simulates each firm's decisions by taking into account the variables specified to the decision-makers. At the end of this simulation, the results of the decisions made in the markets are calculated in the competitive environment.

According to these results, which products were sold in which markets and how many unit prices, and how many units were left in stock and the proceeds from this sale, the unit costs incurred to obtain this revenue, transportation costs, taxes, financial expenses and net profit they see. At the end of the round, they can also see the results reported comparatively with the sector data. Each firm has full knowledge of its own situation as well as the status of its competitors when starting the next round. It also has full knowledge of the market's capacity, customers' approach, and the market situation. In the light of these data, the company managers (students) enter their investment decisions, production decisions, and how many products they will send to the market in the following year, and predict the best and worst scenario. After the managers of all firms enter these decisions, the manager saves the round again and runs the simulation. The simulation creates the results taking into account all variables. According to these results, the managers of each company see both their performance and the performance of other companies in the sector. This process continues for 8 rounds. The results in each round are influenced by the decisions in the following rounds. The students experience the competitive strategies that we have mentioned in the headings in the article in a simulation environment. With this simulation program, an abstract and theoretical business management is transformed into an application where a significant part of strategic management methods are applied and supported by financial analysis methods.

In this article, simulation and results of competitive approaches in Capsim simulation application will be discussed in terms of strategic management and competition strategies.

3.2 Competitive advantage in global industries

The economic dimension of globalization has become evident with the expansion of economic transactions and economic activities, crossing the borders of the country, and increasing expansion of the economies, and the increase of mutual economic dependence as deepening economic integration in the world (Incekara, 2011: 5). Globalization of enterprises is more than international business or multinational corporation. International business is the name given to all kinds of commercial activities taking place within the borders of two or more countries. Multinational companies are direct investments in more than one country in the form of marketing and production subsidiaries. (Wild, 2017: 4-5).

Businesses want to sell their products on a global basis, to have a certain market share in these markets and to promote their products in these markets. They compete with local and international competitors in the markets they sell. In international markets, they are also influenced by foreign exchange prices, transportation times and prices, local regulations, and local customer expectations. Therefore, they need to have global competition strategies.

It has been concluded that many factors are effective in firm-supplier expectation relationships in globalization decisions. In their growth strategies, companies have based their expectations from their suppliers on traditional supplier relations such as cost, quality and timely delivery. There is no strong evidence that the firms examined have identified internationalization as a strategic option. Only one firm strongly emphasized the need for suppliers that could provide cost advantage for internationalization. The firm-supplier relationship is dominated by the concept of "inde cost, quality, on-time delivery" as stipulated by the traditional / competitive approach. This indicates that the supplier is not a "strategic partner ve and that the understanding of learning and development has not yet been developed by developing long-term cooperation with it (Çoşkun, 2019).

In order to grow and maintain their sustainability, businesses should analyze their internal dynamics as well as the factors in the foreign market. They need to anticipate possible outcomes and make the best use of opportunities and threats. The resources of organizations are their strategic planning which enables them to take action against changing environmental conditions in line with their own competencies and plans. It has been proved that enterprises that make strategic marketing plans are more prepared for risks than those who do not, and that they can take rapid action in case of sudden events thanks to alternative strategic plans prepared in advance. Strategic marketing planning clearly shows the situation between the point that the enterprise has and the situation it aims to reach. It requires the entity to determine its objectives, objectives and activities to enable them to be achieved. The strategic planning process for an organization should identify the critical success factors that will lead the organization to its objectives, and a situation analysis should be performed. Customer needs and expectations are a topic that needs to be emphasized in the strategic planning process. When interpreting the information gathered by state analysis methods such as SWOT, the entire roadmap is determined for the enterprises. Strategic marketing planning ensures that organizations are competitive and able to stand stronger against risks under market conditions by providing competitive advantage (Türk, et al., 2019).

The emergence of two different competitive dimensions (product competitiveness and operational competitiveness) can be interpreted as an indication that enterprises can compete with their competitors in different ways. In addition, enterprises can come a long way in gaining competitive advantage by revealing the competitive dimensions in which they focus and have deficiencies in strategic decision-making processes (Erdil, 2018).

According to Porter, "Theory of Comparative Advantages", which is based on the factor of production, is inadequate to determine the superiority in today's modern industries. The Theory of Comparative Advantages should be replaced by the Competitive Advantage Theory. However, Porter's Diamond Model does not address the country's competitiveness but rather the local factors that affect the competitiveness of firms. Firms can increase their productivity with these local factor advantages, and this increase in productivity can increase the welfare level of the country where the firm is located. However, the fact that the companies in the country are competitive in the international arena may not mean that the country can have competitiveness in the international arena (Gökmenoğlu, 2018).

The fact that the country's location, cultural wealth and beauties and natural resources can be complemented by efficient and efficient use of products such as qualified labor, advanced transportation and infrastructure and information technologies will increase the competitiveness at maximum level. (Özdemir, 2019).

Recently, businesses have entered into big brand battles to gain competitive advantage. In every region of the world, the enterprises that directly use the social media channel used by all consumers in terms of their demographic characteristics have tried to differentiate it with different strategies and these new searches have led the enterprises to real-time marketing. Nowadays, with the change in consumer demands and needs very quickly, we are moving towards the periods in which businesses will try to find new marketing tactics. Because with the rapid change of technology, there are many things that people imagine. At the same time, marketing strategies are constantly changing and it is a fact that in the following periods, only the management level will be composed of people and the rest of the activities will be carried out by the robots. If every business that turns this into an opportunity adopts different strategies, develops new marketing tactics and identifies weak points and evaluates opportunities, it will be highly likely to gain competitive advantage and to create brand value by positioning in the minds of consumers. (Toksarı, 2018).

Managers should give importance to developing new strategies that will provide competitive advantage and increasing market share. In this context, timely delivery of the product or service, increasing the quality, conforming to the standards, creating a sense of trust in the consumer and increasing the quality of the personnel become important. (Yüksekbilgili and Özkeskin, 2019).

Capsim application allows us to compete globally with 6 companies in the US, Europe and Asia Pacific markets. Production, investment and R & D, product development, marketing, product promotion, financial decisions are made by students on a global basis using this application. The decisions made are simulated with the decisions made by other companies and the assumptions put forward at the beginning and the results emerge. Before using the program, user definitions are made and companies and users are matched. After watching the training videos and reading the explanatory notes, the program starts to be used. In a simulation with 6 firms in the medical field, decisions are made in each round by taking into consideration financial conditions, competitors' decisions and situations, previous period firm performance and future expectations.

3.3 Competition environment

The operating environment of the enterprises and the industrial environment constitute the competitive environment. The remote environment is composed of economic, social, political, technological and ecological factors that affect how it will gain competitive advantage. Its activities include competitors, lenders, customers, labor and suppliers. In the industrial environment, there are barriers to entry into the sector, the power of suppliers, the power of buyers, the availability of substitutes and the competitive race factors. (Pearce & Robinson, 2015:81).

The competitive environment includes factors that affect the success of a firm in finding the resources it needs, or profitably marketing its goods and services. The most important of these factors are the competitive position of the company, the composition of its customers, its reputation among suppliers and credit institutions and the ability to attract talented employees. The operating environment is typically located in the firm's impact or control area as compared to the remote environment. (Pearce & Robinson, 2015:103).

Today's businesses continue to live in a complex environment that is considered normal. To ensure long-term sustainable competitive advantage in such an environment, business strategies need to be aligned with environmental conditions. Therefore, businesses need a good strategic analysis, but also correct strategic planning and then the success of this strategic plan.

Globalization and technological developments have led to a business environment where faster and unpredictable changes occur, diversity and complexity increase, and competitive pressure is very severe. Companies need to adapt to these business environment conditions in order to survive and succeed. The most important condition of being able to adapt is that the enterprises recognize the environments in which they operate, understand the structural characteristics of these environments and develop and use environmental analysis methods in which they can respond effectively to these environmental changes. (Taşgıt and Ergün, 2015).

The business environment, also known as the competitive environment, can be defined as a close environment outside the boundaries of the organization and within all the forces (factors) affecting the organization.

The remote environment; environment in a wider perspective, including the business / competition environment. They are political, economic, sociocultural, technological, legal and ecological environmental components called PESTLE in the literature. It has a strong impact on the development of the main strategies of the organization. Industrial environment; It refers to the environment that has a direct impact on the industry or the sector, which directly affects the operations and success of the organization, such as customers, suppliers, potential customers, potential competitors, competitors.

When the interactions of the components of the business environment and their effects on the organization are examined, it is seen that there are differences in terms of importance level, speed of impact and type of impact (direct and indirect). While the impact of some environmental components on the organization is more significant (strategic), faster (short-term) and direct than others, the impact of some environmental components is less significant, long-term and indirect. At the same time, the degree of being affected by environmental factors is a concept that varies according to the type and

characteristics of the enterprises. For this reason, enterprises should determine a priority and priority for environmental factors affecting them. From the business environment classifications to the general environment, the conditions related to the future of the enterprise; the industrial environment mainly refers to the conditions and factors affecting the profitability of the firm within the industry; the competition environment focuses on the activities, moves and trends of competitors. (Taşgıt and Ergün, 2015)

The Capsim program includes 6 competing medical firms, lenders, customers on three continents, technology level, substitute products and a competitive environment. According to the decisions made in this environment, the decisions showing all round sales amounts of a simulation company are as follows. For each round, estimations of number of sales according to good scenario and bad scenario, unit sales prices, regional promotion and sales expenses and product-based marketing expenses for the US, Europe and Asia-Pacific markets are made as follows:

Table 1: Sales forecasts for good markets and bad scenarios for the US, Europe and Asia-Pacific markets

		Price	Worst Case Forecast	Best Case Forecast	Promo	Sales	Regional Promo	Regional Sales
1. Round								
Americas	Able	33	1250	2250	1000	1500	1000	1500
Americas	ASmart	0	0	0	0	0		
Europe	Able	33	250	500	1000	1500	1000	1000
Europe	ASmart	0	0	0	0	0		
Asia Pacific	Able	0	0	0	0	0	0	0
Asia Pacific	ASmart	0	0	0	0	0		
2. Round								
Americas	Able	31	1500	2572	1000	1500	1000	1500
Americas	ASmart	40	500	1188	0	0		
Europe	Able	34	500	800	500	500	1000	1000
Europe	ASmart	42	100	250	0	0		
Asia Pacific	Able	0	0	0	0	0	0	0
Asia Pacific	ASmart	0	0	0	0	0		
3. Round								
Americas	Able	27	1300	2000	1000	1500	2000	2000
Americas	ASmart	38	1200	2000	2000	1500		
Europe	Able	0	0	0	0	0	2000	2000
Europe	ASmart	37	1000	1250	1000	2000		
Asia Pacific	Able	0	0	0	0	0	500	500
Asia Pacific	ASmart	38	330	330	500	500		
4. Round								
Americas	Able	27	500	650	500	500	1000	1000
Americas	ASmart	40	1000	1112	1000	1000		
Europe	Able	0	0	0	0	0	1500	1500
Europe	ASmart	40	1200	1477	500	1500		
Asia Pacific	Able	0	0	0	0	0	500	500
Asia Pacific	ASmart	38	350	300	500	500		
5. Round								
Americas	Able	27	600	600	500	500	1000	1000
Americas	ASmart	36	1000	1030	1000	1000		
Americas	Atech	0	0	0	0	0		
Americas	Aprime	0	0	0	0	0		
Europe	Able	0	0	0	0	0	500	500
Europe	ASmart	38	1200	1200	500	500		
Europe	Atech	0	0	0	0	0		
Europe	Aprime	0	0	0	0	0		
Asia Pacific	Able	0	0	0	0	0	500	500
Asia Pacific	ASmart	37	400	500	500	500		
Asia Pacific	Atech	0	0	0	0	0		
Asia Pacific	Aprime	0	0	0	0	0		
6. Round								

Americas	Able	26	406	406	200	200	500	500
Americas	ASmart	40	446	546	1000	1000		
Americas	Atech	0	0	0	0	0		
Americas	Aprime	0	0	0	0	0		
Europe	Able	0	0	0	0	0	1000	1000
Europe	ASmart	40	1419	1500	1000	1000		
Europe	Atech	0	0	0	0	0		
Europe	Aprime	0	0	0	0	0		
Asia Pacific	Able	0	0	0	0	0	500	500
Asia Pacific	ASmart	39	382	400	500	500		
Asia Pacific	Atech	0	0	0	0	0		
Asia Pacific	Aprime	0	0	0	0	0		
7.Round								
Americas	Able	0	0	0	0	0	1000	1000
Americas	ASmart	35	700	787	2000	2000		
Americas	Atech	0	0	0	0	0		
Americas	Aprime	38	750	850	1000	1000		
Europe	Able	0	0	0	0	0	1500	1500
Europe	ASmart	35	1213	1313	2000	2000		
Europe	Atech	0	0	0	0	0		
Europe	Aprime	38	750	850	1000	1000		
Asia Pacific	Able	0	0	0	0	0	1000	1000
Asia Pacific	ASmart	35	450	500	1000	1000		
Asia Pacific	Atech	0	0	0	0	0		
Asia Pacific	Aprime	38	450	492	1000	1000		
8. Round								
Americas	ASmart	35	519	519	500	1000	1000	1000
Americas	Atech	39	295	295	1000	500		
Americas	Aprime	38	581	581	1000	1000		
Europe	ASmart	37	886	886	500	1000	1000	1000
Europe	Atech	42	787	787	1000	1000		
Europe	Aprime	39	886	886	1000	1000		
Asia Pacific	ASmart	33	318	318	500	500	500	500
Asia Pacific	Atech	0	0	0	0	0		
Asia Pacific	Aprime	36	331	331	500	500		
9. Round								
Americas	ASmart	35	519	519	500	1000	1000	1000
Americas	Atech	39	295	295	1000	500		
Americas	Aprime	38	581	581	1000	1000		
Europe	ASmart	37	886	886	500	1000	1000	1000
Europe	Atech	42	787	787	1000	1000		
Europe	Aprime	39	886	886	1000	1000		
Asia Pacific	ASmart	33	318	318	500	500	500	500
Asia Pacific	Atech	0	0	0	0	0		
Asia Pacific	Aprime	36	331	331	500	500		

Source: *Capsim Competition Round Report, May, 2019.*

3.4 Competitive location

Evaluating the position of the firm There are strategic issues that the firm must decide to optimize the opportunities around it. These are market share targets, product range, efficiency of sales distribution network, price competitiveness, advertising and promotion efficiency, location, age, capacity and productivity of the facility, raw material costs, financial position, product quality, R & D expenditures, personnel skill level, customer profile, patents and copyrights, trade union relations, technological position, firm awareness. The market position of the company is determined by whether the price of the products is cheap or very expensive and the quality of the product is poor and excellent. If the product's properties are poor and the price is cheap, it has the characteristics of a performance product according to its economic features, excellent features and high price. The basic condition of existence in the market is "product development" power. To develop a product and to design a new product and process. The basic dynamics of the market is to be able to age the developed

products with new ones. Organizations that want to keep up with this dynamic should even invest in R & D and innovation. Nowadays, every day an organization that does not provide innovative development, cannot increase its own resources and does not give sufficient importance to R & D is obliged to be eliminated. The basic rule of achieving sustainable competitive advantage is to develop products and market these products by positioning them correctly in the market. In today's economic system, in addition to price competition, competition in the axis of product and performance is gaining importance. The economic system, in which the first entrant takes the market, gives companies sustainable competitive advantage and the chance to live, depending on their ability to acquire, use and develop information. For organizations that are far from new developments, the end of the road appears.

In order to better understand this new economy, it is useful to state some of its basic characteristics and dynamics. In today's product development stage, due to the high costs of innovation and R & D investments, companies have high fixed costs and relatively low marginal costs compared to these fixed costs. When the product development process is completed and the production phase is started, companies can produce at very low unit costs with the effect of economies of scale. Network occupies an important place in the new economy. The rapid development of information technologies and software has affected the whole world. The backbone of the new economic system is competition. There is a situation where the winner takes everything. This leads companies to innovation and R & D. New product investments must always exist to be competitive. The result is a rapid transition from price-based competition to innovation, innovation and product development based competition in the new economy. Economies of scale play an important role in the life of firms. Of course, service and after-sales services, customer relations also gain importance. Competition in the new economy can be evaluated in two parts as price and non-price competition. In traditional market types, where technological progress is slow, competition is focused on price. In the new economic process, there is a dynamic competition and this competition is shaped not by price but by "innovation". Therefore, the most important building block of sustainable competition is "innovation". In the new economic markets, where there is a dynamic competition process, there is no competitive understanding of high quality and low price. The innovation process in these markets directs manufacturers to develop a new product into a product that is no longer in demand in the market. In traditional markets where a static competition concept is valid, firms aim to maintain their market position and / or market shares by using data technologies in the short term. It is aimed to use new technologies in the long term by taking into consideration the existing and potential competitors in the new economic process where dynamic competition is experienced. While static competition in traditional economies is price competition based on cost advantage, dynamic competition in the new economy is considered as competition in innovation. In innovative markets, the technological features of products are as important as the price for consumers. For this reason, manufacturers have to compete in price competition as well as in performance competition. (Bayraktar and Kaya, 2016)

3.5 Environmental Factors

Industrial factors and the remote environment determine the environmental factors. In the industrial environment, there are barriers to entry into the sector, the power of suppliers, the power of buyers, the availability of substitutes and the competitive race. The remote environment is composed of economic, social, political, technological and ecological factors that affect how it will gain competitive advantage. The names, production capacities and automation levels of the 6 companies competing in the Capsim simulation application are as follows in the 8th Round.

Round 8's sales volume, production and subcontracting, American, European and Asia-Pacific stocks, average sales prices, raw material costs, labor costs and transportation costs are as follows. This table is created by the program for each round. The first letters of the products and the first letters of the names of the companies are kept by the program so that the user can follow easily. Below is the report of Andrews for the 8th Round.

Table 2: Production capacities and automation levels of competing firms

TEAM		Andrews	Baldwin	Chester	Digby	Erie	Ferris
Start	Capacity	2.000	2.000	2.000	2.000	2.000	2.000
	Automation	3,0	3,0	3,0	3,0	3,0	3,0
1.Round	Capacity	2.000	2.000	2.000	2.000	2.000	2.000
	Automation	3,0	3,0	3,0	3,0	3,0	4,5
2. Round	Capacity	2.000	2.300	2.300	2.000	2.200	2.500
	Automation	3,0	3,1	4,0	3,0	3,0	4,5
3. Round	Capacity	2.000	3.000	2.300	2.600	3.000	3.400
	Automation	3,0	3,4	4,0	3,0	3,2	4,8
4. Round	Capacity	2.000	4.165	2.300	4.000	3.500	4.150
	Automation	3,0	3,5	4,0	3,0	3,6	5,0
5. Round	Capacity	2.320	6.000	3.000	5.000	4.250	4.400
	Automation	3,1	3,8	4,0	3,0	4,0	6,0
6. Round	Capacity	3.400	6.000	3.000	5.000	4.500	5.400
	Automation	3,1	5,0	4,0	3,0	4,0	6,0
7. Round	Capacity	3.400	6.000	3.018	5.000	4.500	6.400
	Automation	4,0	5,5	4,0	3,5	4,0	6,0
8. Round	Capacity	3.400	6.000	3.018	5.000	5.500	6.900
	Automation	4,0	5,5	4,0	4,0	4,0	6,0

Source: *Capsim Competition Round Report, May, 2019.*

Table 3: Round 8 Product based production, sales and inventory numbers and price cost table

Name	Units sold	Production	Outsource	Inventory America	Inventory Europe	Inventory Asia-Pacific	Average Price	Average Material Cost	Average Labor Cost	Average Shipping
Asmart	1.678	1.378	0	44	0	0	\$35,00	\$12,58	\$10,84	\$2,06
Atech	1.032	1.082	0	0	51	0	\$40,50	\$14,44	\$10,94	\$2,14
Aprime	1.455	885	0	0	343	0	\$37,67	\$13,00	\$10,62	\$1,69
Baker	4.818	3.218	1.600	0	0	0	\$29,50	\$8,81	\$10,12	\$1,48
Batlan	2.358	2.722	400	350	505	836	\$36,67	\$12,60	\$8,96	\$1,69
Bazar	500	0	500	0	0	0	\$38,00	\$10,33	\$13,30	\$0,00
Buble	669	0	700	31	0	0	\$39,00	\$10,96	\$13,30	\$0,00
Cake	0	0	5	0	5	0	\$0,00	\$0,00	\$0,00	\$0,00
Catex	3.787	2.498	0	442	567	58	\$38,00	\$13,74	\$8,36	\$1,84
cpro02	0	0	0	0	0	0	\$0,00	\$0,00	\$0,00	\$0,00
daze3	1.986	1.458	0	528	0	0	\$37,00	\$12,34	\$11,07	\$2,09
daze4	2.184	1.329	0	218	0	0	\$37,00	\$11,52	\$11,10	\$2,04
Eat	5.158	3.812	1.550	454	101	252	\$37,67	\$12,53	\$11,45	\$1,55
Enter	3.126	1.633	1.450	300	0	147	\$38,50	\$11,99	\$11,87	\$1,14
Fast	6.019	3.614	2.500	656	0	574	\$26,00	\$8,09	\$9,74	\$1,75
Fierce	5.212	1.485	4.250	461	0	268	\$23,50	\$5,91	\$11,50	\$1,60
Fight	1.578	1.732	0	154	0	0	\$25,00	\$6,66	\$7,77	\$0,00

Source: Capsim Competition Round Report, May, 2019.

3.6 Competitive advantage

The concept of competitive superiority means that an enterprise gains an advantage over the market by creating better customer value. Competitive advantage is possible in many ways; differentiation strategies, evaluating speed as a competitive advantage and market-oriented approaches.

Competition is the effort of enterprises to gain superiority against each other. It is also a key element of the success or failure of businesses. Competitive powers of enterprises determine the profitability of the sector. Firms producing similar goods or services in the sector need competition strategies in order to survive against competition. The competition strategy is the search for a competitive position for businesses in the sector. If businesses want to succeed, they should either take steps to achieve cost leadership or turn to differentiation. At the same time, businesses can achieve success by focusing, ie they can be either cost leaders or implement differentiation in niche markets. (Mirzayeva and Türkay, 2016).

Technological resources and talent positions give a better result in sustainable competitive advantage. (Huang, et al. 2015:30)

In the Capsim simulation application, the products requested in the budget or performance category are listed for each market. Even if the product is a performance product, it can be demanded in the budget category according to the price and product characteristics (age, unit price, regional kit, service time, product specifications). Customer satisfaction of the products is also included in this table. The report in the table below for each round is presented to the users at the end of the round. Users can make decisions based on this information in the following rounds.

Table 4: Ranking of the 8th round budget products in terms of regional markets

Top Products in Budget												
Region	Name	Units sold	Price	Customer Satisfaction	Accey	Speed	Service Life	Age	Region Kit	Material Cost	Labor Cost	Contr. Margin
Americas	Baker	2.436	\$29,00	26	8,1	8,1	21.000	2,6	yes	\$8,81	\$10,30	34,09%
	Fierce	2.231	\$23,00	23	8,0	8,0	14.000	2,5	no	\$6,00	\$8,28	36,36%
	Fast	1.816	\$26,00	13	8,0	8,0	17.000	4,9	yes	\$8,30	\$7,60	36,16%
	Fight	1.578	\$25,00	15	8,0	8,0	16.000	1,9	yes	\$6,66	\$7,77	41,61%
	Bazar	344	\$38,00	6	8,6	10,0	20.000	3,1	yes	\$10,33	\$13,30	37,80%
	Buble	288	\$39,00	3	10,5	9,5	20.000	3,1	yes	\$10,96	\$13,30	37,44%
	daze4	237	\$37,00	2	11,0	9,0	17.000	2,0	yes	\$13,39	\$11,17	30,62%
	Asmart	140	\$35,00	2	11,0	11,0	22.000	3,9	yes	\$12,63	\$10,72	32,53%
	daze3	138	\$39,00	1	10,0	11,0	21.000	3,7	yes	\$13,34	\$11,14	28,77%
	Batlan	70	\$38,00	1	11,2	11,2	23.000	2,2	yes	\$12,89	\$8,82	40,29%
Aprime	27	\$38,00	0	11,0	11,0	22.000	1,5	yes	\$13,25	\$10,44	37,67%	
Europe	Baker	2.383	33,00 €	17	8,1	8,1	21.000	2,6	yes	\$8,81	\$9,94	27,49%
	Asmart	547	40,70 €	0	11,0	11,0	22.000	3,9	yes	\$12,57	\$10,94	28,36%
	daze4	513	40,70 €	0	11,0	9,0	17.000	2,0	yes	\$10,16	\$10,94	34,88%
	daze3	361	40,70 €	0	10,0	11,0	21.000	3,7	yes	\$11,78	\$10,94	30,50%
Asia	Fast	4.203	\$26,00	12	8,0	8,0	17.000	4,9	yes	\$8,00	\$10,66	17,25%
Pasific	Fierce	3.982	\$24,00	15	8,0	8,0	14.000	2,5	no	\$5,85	\$13,30	9,04%
	daze3	581	\$35,00	3	10,0	11,0	21.000	3,7	yes	\$12,25	\$11,13	26,04%
	daze4	447	\$37,00	1	11,0	9,0	17.000	2,0	yes	\$11,72	\$11,24	31,20%
	Batla	190	\$34,00	1	11,2	11,2	23.000	2,2	no	\$11,35	\$9,57	18,61%
	Asmart	184	\$33,00	2	11,0	11,0	22.000	3,9	yes	\$12,52	\$10,77	21,85%
Aprime	75	\$36,00	1	11,0	11,0	22.000	1,5	yes	\$13,25	\$10,44	27,26%	

Source: Capsim Competition Round Report, May, 2019.

Table 5: Ranking of the 8th round performance products in terms of regional markets

Top Products in Performance												
Region	Name	Units sold	Price	Customer Satisfaction	Accy	Speed	Service Life	Age	Region Kit	Material Cost	Labor Cost	Contr. Margin
Americas	Eat	2.227	\$37,50	75	12,6	12,6	22.000	1,5	yes	\$13,50	\$10,78	34,61%
	Enter	1.701	\$38,00	74	12,7	12,7	22.500	1,3	no	\$11,99	\$10,77	38,84%
	Catex	1.303	\$37,50	32	11,8	11,8	22.000	1,8	yes	\$14,17	\$7,83	38,95%
	Batlan	866	\$38,00	27	11,2	11,0	23.000	2,2	yes	\$12,89	\$8,82	40,29%
	Aprime	554	\$38,00	17	11,0	11,0	22.000	1,6	yes	\$13,25	\$10,44	37,67%
	Buble	381	\$39,00	11	10,5	9,5	20.000	3,1	yes	\$10,99	\$13,30	37,44%
	daze4	345	\$37,00	9	11,0	9,0	17.000	2,0	yes	\$13,39	\$11,17	30,62%
	Asmart	334	\$35,00	9	11,0	11,0	22.000	3,9	yes	\$12,63	\$10,72	32,53%
	daze3	333	\$39,00	10	10,0	11,0	21.000	3,7	yes	\$13,34	\$11,14	28,77%
	Atech	295	\$39,00	47	13,0	13,0	22.000	0,9	yes	\$14,44	\$10,94	34,94%
	Bazar	156	\$38,00	5	8,6	10,0	20.000	3,1	yes	\$10,33	\$13,30	37,80%
Europe	Catex	1.528	41,58 €	26	11,8	11,8	22.000	1,8	yes	\$13,37	\$8,46	31,40%
	Eat	1.284	41,25 €	32	12,6	12,6	22.000	1,5	no	\$12,04	\$10,87	30,24%
	Batlan	869	41,80 €	20	11,2	11,2	23.000	2,2	yes	\$13,10	\$8,72	30,13%
	Atech	736	46,20 €	23	13,0	13,0	22.000	0,9	yes	\$14,44	\$10,94	31,88%
	Aprime	543	42,90 €	12	11,0	11,0	22.000	1,5	yes	\$12,57	\$10,94	26,87%
	daze4	389	40,70 €	8	11,0	9,0	17.000	2,0	yes	\$10,16	\$10,94	34,88%
	daze3	354	40,70 €	8	10,0	11,0	21.000	3,7	yes	\$11,78	\$10,94	30,50%
	Asmart	339	40,70 €	7	11,0	11,0	22.000	3,9	yes	\$12,57	\$10,94	28,36%
Asia Pasific	Eat	1.646	\$38,00	58	12,6	12,6	22.000	1,5	no	\$12,07	\$12,80	26,65%
	Enter	1.425	\$39,00	65	12,7	12,7	22.500	1,3	no	\$11,98	\$13,18	28,18%
	Catex	955	\$38,70	24	11,8	11,8	22.000	1,8	yes	\$13,76	\$8,92	34,47%
	Batlan	363	\$34,00	12	11,2	11,2	23.000	2,2	no	\$11,35	\$9,57	18,61%
	Aprime	257	\$36,00	10	11,0	11,0	22.000	1,5	yes	\$13,25	\$10,44	27,26%
	daze4	253	\$37,00	7	11,0	9,0	17.000	2,0	yes	\$11,72	\$11,24	31,20%
	daze3	219	\$35,00	9	10,0	11,0	21.000	3,7	yes	\$12,25	\$11,13	26,04%
	Asmart	134	\$33,00	6	11,0	11,0	22.000	3,9	yes	\$12,52	\$10,77	21,85%

Source: *Capsim Competition Round Report, May, 2019.*

4. Managerial implications

4.1 Implications on low cost strategies and outputs

It is for companies to reach and maintain their low cost position in the market during the production process. This advantage can be provided for reasons such as providing raw material items that are rare, having production opportunities with low technology and low labor force, being close to raw materials, having high capital and not paying the financial burden. Success based on cost leadership is the ability of an enterprise to produce its products at a cost that is lower than that of its competitors. This advantage reduces the risk of future price pressure. Cost leadership should not be limited to production processes but should be supported by technological design superiority, general management supported by integrated computer systems, optimum planned procurement processes, logistics and marketing activities, strong financial structure and continuous improvement and development projects. The low cost advantage reduces the attractiveness of substitute products.

The cost leadership strategy is that companies use above all components of their activities to reduce their costs and gain above average returns and gain competitiveness with their competitors at low prices. In this strategy, there is no reduction in product price, and the reduction of costs in all activities is taken into consideration. Thus, by lowering the costs, the difference between the prices in the sector and the costs of the enterprise will be opened and the firm will gain a cost advantage over its competitors by gaining above the average return. The point here is that while reducing costs, quality should not be

compromised. Having a low-cost position gives businesses average returns despite the presence of strong competitive forces in the sector. Achieving a low total cost position often requires easy access to raw materials, high market share and other advantages. In order to implement the cost leadership strategy, enterprises should be able to obtain input from low prices by using economies of scale, provide cost control, minimize inventory costs of raw materials, distribution costs and also advertising and marketing costs. In order for the cost advantage to be sustained, the company's resources must be too difficult or not copied by competitors in the sector. The cost leadership strategy is more effective when customers are price sensitive and competitors use lower-cost distribution channels. Successful cost-leading businesses generally position themselves to create customer value by emphasizing low cost. The low cost strategy provides a price-based advantage as well as a number of disadvantages. Mirzayeva & Türkay, (2016).

4.2 Implications on differentiation strategy

Strategies based on differentiation are based on attracting the attention of customers by highlighting the characteristics of certain products. These products create customer loyalty with superior features. In addition to being a product of performance, significant amounts of expenditure must be spent for advertising and promotion activities. Competition decreases when a business successfully differentiates itself. Customers are less sensitive to the price of effectively differentiated products. Brand loyalty is at the highest level in differentiated products. This will be a problem for competitors' new products.

The differentiation strategy aims to differentiate its products and services from its competitors as much as possible and provide above-average returns. Through this strategy, enterprises aim to meet their customers' wishes and expectations differently from their competitors and try to make a profit above the sector average by applying a higher price that the customer is ready to pay in return. The aim of the differentiation strategy is to differentiate the product or service offered by the company and to create a unique position in the whole sector. There are different forms of approaches to differentiation, but it is ideal that the business differentiates itself in various dimensions. Before differentiating the products and services from the competitors by making differentiation, companies should pay attention to how important the differentiation approach they choose is for the target customers or whether they will be perceived positively for the target customers and how high the customers will be willing to pay for the differentiation to be made.

Differences that do not meet customer expectations and do not create value for them will not be accepted by customers and will not be willing to pay the high price. At the same time, businesses must ensure that their capabilities and resources are sufficient before achieving the differentiation that they want and plan, otherwise the costly strategic approach will fail. The aim of the differentiation strategy is to provide a competitive advantage through the unique products and services obtained by highlighting the distinctive elements such as innovation, prestige, quality and high technological adaptations. The cost leadership strategy may not always be appropriate in today's conditions. In this case, what businesses need to do is turn to differentiation. As in all sectors, there are many enterprises that implement differentiation in the tourism sector. Businesses that succeed using this path have their own target audience. Differentiation also affects the price of the product, and not everyone can afford to pay that price. (Mirzayeva & Türkay, 2016).

4.3 Implications on competitive weapons: speed and market oriented approach

Fast delivery of products and services to customers compared to competitors. The speed of sales and after-sales services reaching the customer provides an advantage over competitors. The length of waiting times for products to arrive late is undesirable for customers. Since companies are aware of this situation, they want to provide superiority to their competitors by building their competitive strategies and superiorities on this feature. Speed is also important in product development cycles. Speed is an indication of being sensitive to customer needs. Rapid product and service improvements also reinforce customer loyalty.

Companies focus on meeting the needs of a particular market segment. The focus can be geo-based or according to customers' income levels. It is also possible to focus on the gender or age of the customer or according to their educational background. The distinctive characteristics of the customers are the areas that define the boundaries of the market and that the firm should focus on.

The focus strategy does not address the entire industry, such as the cost leadership strategy and differentiation strategy, but rather a specific group of buyers, a cross-section of the product range, or a geographic market, small and specific customer groups. An entity can either achieve differentiation by better meeting the needs of a particular goal, or by reducing its costs by serving that goal, or both at the same time. Businesses can generally narrow their markets as follows: By dividing the market geographically / regionally, by narrowing the market according to different and different customer requests and requirements, they can create a new and different market by producing products with different characteristics.

The focusing entity can potentially generate returns above the average for the sector. However, when the market segment of the enterprise that has adopted the focusing strategy rises above a certain size, this will lead to intensification of competition in the sector as it will attract the attention of big competitors, which will create a dangerous situation for the enterprise. (Mirzayeva & Türkay, 2016).

In Capsim simulation application, the decisions regarding production amounts, production capacity and automation level in the process from the first round to the 8th round are as follows. These decisions are made on a per unit basis for each product in global markets. Below are the students' decisions for each round for Andrews.

Table 6: Production decisions of students for Andrews

	Name	Americas Production	Americas Oursource	Europe Production	Europe Outsource	Asia Pasific Production	Asia Pasific Outsource
1. Round	Able	1750	500	0	0	0	0
	Asmart	0	0	0	0	0	0
	Capacity	2000		Automation		3	
2. Round	Able	800	1000	0	0	0	0
	Asmart	1200	0	0	0	0	0
	Capacity	2000		Automation		3	
3. Round	Able	940	0	0	0	0	0
	Asmart	892	0	168	1080	0	330
	Capacity	3410		Automation		3	
4. Round	Able	500	0	0	0	0	0
	Asmart	0	0	1500	0	0	200
	Capacity	2200		Automation		3	
5. Round	Able	600	0	0	0	0	0
	Asmart	400	0	1020	0	300	0
	Atech	0	0	0	0	0	0
	Capacity	2320		Automation		3	
6. Round	Able	406	0	0	0	0	0
	Asmart	333	0	1419	0	162	0
	Atech	0	0	0	0	0	0
	Aprime	0	0	0	0	0	0
	Capacity	3400		Automation		3,1	
7. Round	Able	0	0	0	0	0	0
	Asmart	800	0	0	0	400	0
	Atech	0	0	0	0	0	0
	Aprime	850	0	850	0	500	0
	Capacity	3400		Automation		4	
8. Round	Asmart	300	0	900	0	200	0
	Atech	300	0	800	0	0	
	Aprime	0	0	900	0	0	0
	Capacity	3400		Automation		4	

Source: *Capsim Competition Round Report, May, 2019.*

4.4 Long-term business plans-general strategies

General strategies are continuous and coordinated efforts that enable companies to achieve their long-term goals. Three strategies that can be measured and planned with the Capsim program will be emphasized.

Strong (Focused) Growth: It is to direct the company's resources to a market with a dominant technology in the market and with a single product. It is a strategy followed by companies that will penetrate the market for the first time with a single product specializing in that product. In this growth strategy based on superior performance, it is aimed to maximize market share by entering the right need in the market with the right product and the right promotion method.

Market Development: To present products to customers by making superficial changes to existing products, adding additional distribution and marketing channels or changing the content of advertising and promotion. It is a method that requires less cost. However, it does not meet the great expectations of customers. Although it provides satisfaction for first-time purchasers, the changes will not satisfy customers when they receive this product.

Product development: To make major changes to products and sell new products to existing customers. It is adopted to utilize the company's reputation and brand advantage to extend the life span of existing products. It's costly. Increases customer loyalty and largely meets customer expectations.

Innovation: Designing and manufacturing new products to increase profit margins. Fast product cycles create new product expectations for customers. Innovation has been an indispensable expectation in this age of industry. Customers want new products at regular intervals. All competitors develop strategies to meet these expectations. The remaining companies are disadvantaged compared to their competitors.

In a global competitive environment, organizational and managerial innovations are key to success for companies. While technology and research and development activities significantly affect organizational structure and culture, correct innovation management provides a competitive advantage. (Dereli, 2015:1).

Withdrawal: It is the withdrawal of the company or a production department by terminating its activities. The production lines of some products are shut down due to the lack of demand of the products of the company, the sales revenue being below the costs, the completion of the product life curve. Production of these products is discontinued. And the products are withdrawn from the market. However, if this withdrawal occurs in all products, the company will withdraw from the market. In this case, bankruptcy and liquidation will be followed.

The R & D decisions related to the product, development of the existing product, capacity increase, new product development and withdrawal simulations for the product are given in the following 8 rounds, taking into consideration the financial opportunities of the company, competitors' situations and the needs of the market. With Capsim simulation application, the number of products to be produced, features, production speed, service hours, whether it has regional kits, quality is decided. These decisions are taken at each round. At the beginning of the round, the enterprise can close the production line of a product for the next round and decide on R & D for the new product. But he has to know that it has to calculate and bear the financial burden. The first round was started with the Able product, which was initially in the economic category, but it was decided to develop a new product with performance product characteristics and this product was named Asmart. This continued until Round 5 and R & D was initiated for 2 new performance products in Round 5. 8. The production line of Roundda Able is closed.

Table 7: Product R & D decisions table for Andrews Company

R&D	Update	Speed	Accuracy	Service Life	Region Kits	R&D	Update	Speed	Accuracy	Service Life	Region Kits
1.Round						6.Round					
Able	1	6,4	6,4	20000	A E	Able	1	6,4	6,4	20000	A E
Able	2	0	0	0		Able	2	0	0	0	
ASmart	1	8,2	8,2	22000	A E	ASmart	1	11	11	22000	A E AP
ASmart	2	0	0	0		ASmart	2	0	0	0	
2.Round						7.Round					
Able	1	6,4	6,4	20000	A E	Atech	1	13	13	22000	A E AP
Able	2	0	0	0		Atech	2	0	0	0	
ASmart	1	8,2	8,2	22000	A E	Aprime	1	11	11	22000	A E AP
ASmart	2	0	0	0		Aprime	2	0	0	0	
3.Round						8.Round					
Able	1	6,4	6,4	20000	A E	ASmart	1	11	11	22000	A E AP
Able	2	0	0	0		ASmart	2	0	0	0	
ASmart	1	8,2	8,2	22000	A E	Atech	1	13	13	22000	A E AP
ASmart	2	0	0	0		Atech	2	0	0	0	
4.Round						8.Round					
Able	1	6,4	6,4	20000	A E	Aprime	1	11	11	22000	A E AP
Able	2	0	0	0		Aprime	2	0	0	0	
ASmart	1	8,2	8,2	22000	A E	ASmart	1	11	11	22000	A E AP
ASmart	2	0	0	0		ASmart	2	0	0	0	
5.Round						8.Round					
Able	1	6,4	6,4	20000	A E	Atech	1	13	13	22000	A E AP
Able	2	0	0	0		Atech	2	0	0	0	
ASmart	1	11	11	22000	A E AP	Aprime	1	11	11	22000	A E AP
ASmart	2	0	0	0		Aprime	2	0	0	0	
Atech	1	13	13	22000	A E AP						
Atech	2	0	0	0							
Aprime	1	11	11	22000	A E AP						
Aprime	2	0	0	0							

Source: Capsim Competition Round Report, May, 2019.

5. Assessment of business performance in past and present

5.1 Compare business with past performance

As in medicine, a “scientific approach” is required for strategy. From the initial reading of the case and the performance evaluation, we can hypothesize the source of the problems. What needs to be done is to use the available data to see which of these hypotheses is compatible with the facts. (Grant, 2016:22). One of the methods of measuring the success of the company's activities is to compare the company's own past performance. Thus, it is possible to analyze the development and change in the activities of the company compared to the previous year with positive and negative aspects. By examining the factors such as sales turnover, sales units, unit sales prices and profitability in the previous year, the company is informed about the performance of this year. At the end of each round, the capsim simulation application program informs the decision makers about the areas where they are good and bad according to the round results. According to this report, in the following rounds, students can focus on areas to be improved. The performance of Andrews during the 8 rounds is reported below.

Table 8: Andrews Company Performance Charts

Round 1:		
The Good		The Bad
<ul style="list-style-type: none"> Your company was fortunate to sell more units than was projected. Be wary of using this as a baseline for next year's forecasts, as other companies are likely to fix some of their mistakes. By adding a region kit to your products, you have successfully increased your Customer Satisfaction score by 10%. Watch out for the costs associated with having a region kit, though. Your material costs are now 15% higher in the region that your product is tailored. 		<ul style="list-style-type: none"> You received an emergency loan, and that is not a good thing! Big AI came to bail you out, but now you owe a 7.5% premium on top of your current debt interest rate. Make sure you raise enough money to satisfy your expenses next year. You planned on entering into this region, but did not send any units in the Production department. Make sure that all department decisions are aligned with each other. You trailed each company in the industry in profits, which is usually the result of insufficient margins caused by a high cost structure and not high enough prices. Profits can also suffer from excessive expenditures in selling and advertising, heavy interest payments on debt and losses on liquidation of inventory when retiring a product.
Total Score	Raw Percentage	Adjusted Percentage
31	52%	65%

Round 2:

The Good	The Bad
<ul style="list-style-type: none"> Your company was fortunate to sell more units than was projected. Be wary of using this as a baseline for next year's forecasts, as other companies are likely to fix some of their mistakes. By adding a region kit to your products, you have successfully increased your Customer Satisfaction score by 10%. Watch out for the costs associated with having a region kit, though. Your material costs are now 15% higher in the region that your product is tailored. 	<ul style="list-style-type: none"> You received an emergency loan, and that is not a good thing! Big AI came to bail you out, but now you owe a 7.5% premium on top of your current debt interest rate. Make sure you raise enough money to satisfy your expenses next year. You planned on entering into this region, but did not send any units in the Production department. Make sure that all department decisions are aligned with each other. You trailed each company in the industry in profits, which is usually the result of insufficient margins caused by a high cost structure and not high enough prices. Profits can also suffer from excessive expenditures in selling and advertising, heavy interest payments on debt and losses on liquidation of inventory when retiring a product.

Total Score	Raw Percentage	Adjusted Percentage
20	33%	36%

Round 3:

The Good	The Bad
<ul style="list-style-type: none"> Your company was fortunate to sell more units than was projected. Be wary of using this as a baseline for next year's forecasts, as other companies are likely to fix some of their mistakes. The Americas represents your largest customer base, and your company has the highest market share here. Continue to grow your business in the Americas, as projections show steady growth in this region. Congratulations! Your Return on Sales was significantly higher than the industry average. While this isn't the most important measure of your team's health, it does show your ability to turn a profit on each sale. 	<ul style="list-style-type: none"> You received an emergency loan, and that is not a good thing! Big AI came to bail you out, but now you owe a 7.5% premium on top of your current debt interest rate. Make sure you raise enough money to satisfy your expenses next year. Watch your outsourcing levels. Outsourcing typically costs more than producing in-house due to the fixed automation level of 2.0 at the outsourced plant. One of your products had a margin significantly lower than average. Consider reducing material and labor costs or raising the price.

Total Score	Raw Percentage	Adjusted Percentage
25	42%	58%

Round 4:

The Good	The Bad
<ul style="list-style-type: none"> Your stockholders will be happy to see such a huge increase in your stock price! Your company was fortunate to sell more units than was projected. Be wary of using this as a baseline for next year's forecasts, as other companies are likely to fix some of their mistakes. Your Return on Assets was significantly higher than the industry average. Your company is showing a great ability to produce wealth with your assets. 	<ul style="list-style-type: none"> You received an emergency loan, and that is not a good thing! Big AI came to bail you out, but now you owe a 7.5% premium on top of your current debt interest rate. Make sure you raise enough money to satisfy your expenses next year. Watch your outsourcing levels. Outsourcing typically costs more than producing in-house due to the fixed automation level of 2.0 at the outsourced plant. One of your products had a margin significantly lower than average. Consider reducing material and labor costs or raising the price.

Total Score	Raw Percentage	Adjusted Percentage
39	65%	83%

Round 5:

The Good	The Bad
<ul style="list-style-type: none"> Your stockholders will be happy to see such a huge increase in your stock price! You lead Europe in Net Profit, showing your ability to maximize sales and minimize expenses in this region. Don't rest on your laurels, though. Make sure you note where the exchange rates will be over the next few years, as they could change your strategy here. Your company outpaced your competitors, and the industry average, with regards to profits. Keep it up! 	<ul style="list-style-type: none"> You trailed each company in Contribution Margin. Try to reduce your material and labor costs or increase price. However, beware of reducing your product's overall value too much. One of your Budget products is nearing the rough cut of the acceptable age in the Budget segment. Consider making an adjustment to the product's speed and/or accuracy to cut the age in half. One of your products was stuck with very high inventory levels in Asia Pacific. To correct this, reduce your forecasts to a more realistic number, improve your product offering to meet customer demands and increase your marketing expenditures.

Total Score	Raw Percentage	Adjusted Percentage
40	67%	91%

Round 6:

The Good	The Bad
<ul style="list-style-type: none"> By adding a region kit to your products, you have successfully increased your Customer Satisfaction score by 10%. Watch out for the costs associated with having a region kit, though. Your material costs are now 15% higher in the region that your product is tailored. 	<ul style="list-style-type: none"> You received an emergency loan, and that is not a good thing! Big AI came to bail you out, but now you owe a 7.5% premium on top of your current debt interest rate. Make sure you raise enough money to satisfy your expenses next year. You trailed each company in Contribution Margin. Try to reduce your material and labor costs or increase price. However, beware of reducing your product's overall value too much. You had the lowest market share of the entire industry. While sales aren't the most important piece to making profits, increasing your marketing expenditures and/or offering new products may help raise your market share.

Total Score	Raw Percentage	Adjusted Percentage
10	17%	20%

Round 7:

The Good	The Bad
<ul style="list-style-type: none"> Your company was fortunate to sell more units than was projected. Be wary of using this as a baseline for next year's forecasts, as other companies are likely to fix some of their mistakes. By adding a region kit to your products, you have successfully increased your Customer Satisfaction score by 10%. Watch out for the costs associated with having a region kit, though. Your material costs are now 15% higher in the region that your product is tailored. 	<ul style="list-style-type: none"> You received an emergency loan, and that is not a good thing! Big AI came to bail you out, but now you owe a 7.5% premium on top of your current debt interest rate. Make sure you raise enough money to satisfy your expenses next year. You trailed each company in Contribution Margin. Try to reduce your material and labor costs or increase price. However, beware of reducing your product's overall value too much. You had the lowest market share of the entire industry. While sales aren't the most important piece to making profits, increasing your marketing expenditures and/or offering new products may help raise your market share.

Total Score	Raw Percentage	Adjusted Percentage
23	38%	45%

Round 8:

The Good	The Bad
<ul style="list-style-type: none"> Your stockholders will be happy to see such a huge increase in your stock price! You lead Europe in Net Profit, showing your ability to maximize sales and minimize expenses in this region. Don't rest on your laurels, though. Make sure you note where the exchange rates will be over the next few years, as they could change your strategy here. By adding a region kit to your products, you have successfully increased your Customer Satisfaction score by 10%. Watch out for the costs associated with having a region kit, though. Your material costs are now 15% higher in the region that your product is tailored. 	<ul style="list-style-type: none"> You received an emergency loan, and that is not a good thing! Big AI came to bail you out, but now you owe a 7.5% premium on top of your current debt interest rate. Make sure you raise enough money to satisfy your expenses next year. One of your products was stuck with very high inventory levels in Europe. To correct this, reduce your forecasts to a more realistic number, improve your product offering to meet customer demands and increase your marketing expenditures. Your credit rating is suffering, which is potentially due to taking on too much long-term debt compared to your asset base. Improve this to lower your interest rates.

Total Score	Raw Percentage	Adjusted Percentage
30	50%	55%

Source: *Capsim Competition Round Report, May, 2019.*

5.3 Benchmarking business performance with rivals

It is the comparison of the data of competing firms operating in the same sector with the performance of the enterprise. It provides the opportunity to analyze the competitive position and advantages and weaknesses of the company compared to competitors. In the Capsim simulation application, the company's comparative reports with its competitors in terms of products in global markets are presented. Below is an example of the 8th Round comparative report by Andrews.

Table 9: Comparative market share table by budget products

Budgeted	Americas		Europa		Asia Pacific		Total	
	Actual	Potential	Actual	Potential	Actual	Potential	Actual	Potential
Asmart	2%	1%	14%	0%	2%	3%	4%	2%
Aprime	0%	0%	0%	0%	1%	1%	0%	1%
Baker	26%	27%	63%	98%	0%	0%	21%	37%
Batlan	1%	1%	0%	0%	2%	2%	1%	1%
Bazar	4%	6%	0%	0%	0%	0%	2%	2%
Buble	3%	3%	0%	0%	0%	0%	1%	1%
Daze3	1%	1%	9%	1%	6%	8%	5%	4%
Daze4	3%	2%	13%	1%	5%	5%	5%	3%
Fast	20%	19%	0%	0%	44%	42%	26%	22%
Fierce	24%	23%	0%	0%	41%	39%	27%	22%
Fight	17%	16%	0%	0%	0%	0%	7%	6%

Source: *Capsim Competition Round Report, May, 2019.*

Table 10: Comparative market share table based on performance products

Prformance	Actual	Potential	Actual	Potential	Actual	Potential	Actual	Potential
Asmart	4%	4%	6%	6%	3%	4%	4%	4%
Atech	3%	12%	12%	12%	0%	0%	5%	9%
Aprime	7%	6%	9%	9%	5%	6%	7%	7%
Batlan	10%	9%	14%	14%	7%	7%	11%	10%
Bazar	2%	3%	0%	0%	0%	0%	1%	1%
Buble	4%	4%	0%	0%	0%	0%	2%	2%
Catex	15%	14%	25%	25%	18%	18%	19%	18%
Daze3	4%	4%	6%	6%	4%	5%	5%	5%
Daze4	4%	4%	6%	6%	5%	5%	5%	5%
Eat	26%	24%	21%	21%	31%	30%	26%	25%
Enter	20%	18%	0%	0%	27%	26%	16%	15%

Source: Capsim Competition Round Report, May, 2019.

Table 11: Comparative market share table based on total budget and performance products by markets

		Americas		Europa		Asia Pacific		Total	
		Actual	Potential	Actual	Potential	Actual	Potential	Actual	Potential
Andrews	Budged	2%	1%	14%	0%	3%	4%	4%	3%
Andrews	Performance	14%	22%	27%	27%	8%	10%	16%	20%
Baldwin	Budged	34%	37%	63%	98%	2%	2%	25%	41%
Baldwin	Performance	16%	16%	14%	14%	7%	7%	14%	13%
Chester	Budged	0%	0%	0%	0%	0%	0%	0%	0%
Chester	Performance	15%	14%	25%	25%	18%	18%	19%	18%
Digby	Budged	4%	3%	22%	2%	11%	13%	10%	7%
Digby	Performance	8%	8%	12%	12%	9%	10%	10%	10%
Erie	Budged	0%	0%	0%	0%	0%	0%	0%	0%
Erie	Performance	46%	42%	21%	21%	58%	56%	42%	40%
Ferris	Budged	61%	58%	0%	0%	85%	81%	60%	50%
Ferris	Performance	0%	0%	0%	0%	0%	0%	0%	0%

Source: Capsim Round Report

5.4 Sector benchmark

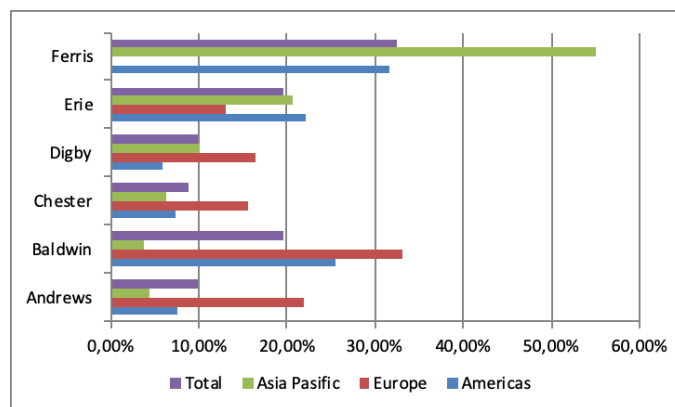
Measurement of the share, position and performance of the enterprise within the sector in which it operates. Taking into account the dynamics of the sector and the basic determinants, the internal dynamics of the company is important in terms of taking a picture of the current situation and forming a future perspective.

The Capsim application reports the competitor firms to follow their market share in each round in terms of global markets. Decision-makers see their market share and competitors' shares in the following rounds, giving them the opportunity to come strategic goals. The following table presents the market share of Andrews and other companies as of the 8th Round.

Table 12: Market shares of Andrews and competitor firms as of 8th round

Market Share	Andrews	Baldwin	Chester	Digby	Erie	Ferris
Americas	7,60%	25,50%	7,30%	5,90%	22,10%	31,60%
Europe	22,00%	33,00%	15,50%	16,40%	13,00%	0%
Asia Pasific	4,40%	3,70%	6,40%	10,10%	20,60%	54,90%
Total	9,80%	19,60%	8,90%	9,80%	19,50%	32,40%

Source: Capsim Competition Round Report, May, 2019.



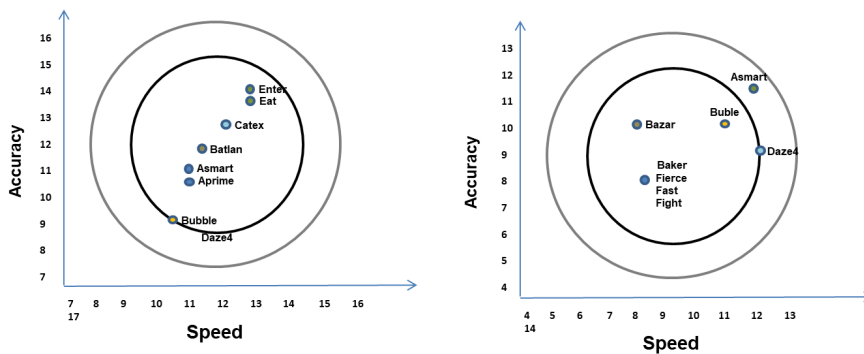
Source: Capsim Competition Round Report, May, 2019.

5.5 Product life curve

There are introduction, growth, ripening and regression stages for each product. Accurate estimation of these, taking into account all competitive conditions, is important for product developments or new product planning. Product life curves are cycles that must be followed for each product, not for a single product. Throughout the different life stages of the products, the business must demonstrate the capabilities and strengths and weaknesses of each universe.

In the implementation of Capsim simulation, the product life conditions of Andrews products are shown in the same graph as of the 8th Round together with the products of other companies. These graphs are reported to users at the end of each round. Decisions on products are taken at each round, taking into account the product life cycles of competitors' products.

Table 13: Product life status of the products as of the 8th round



Source: Capsim Competition Round Report, May, 2019.

5.6 Financial results of competitive approaches in CAPSIM simulation application

According to the results of each round in the simulated implementation of Capsim, the financial results of Andrews Company are shown in the table below. These results are reported separately in each round. Users can see both their own financial report results and the financial report results of competitors.

Table 14: Andrews Company's Cash Flow Statements

Cash Flows From Operating Activities	Start	1. Round	2. Round	3. Round	4. Round	5. Round	6. Round	7. Round	8. Round
	2019	2020	2021	2022	2023	2024	2025	2026	2027
Net Income (Loss)	\$2,864	(\$499)	(\$6,892)	\$1,485	\$5,395	\$6,940	(\$8,322)	(\$9,958)	\$7,791
Adjustment For Non Cash Items									
Depreciation	\$2,400	\$2,400	\$2,400	\$2,400	\$2,400	\$2,854	\$4,179	\$4,995	\$4,995
Extraordinary	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Gains/Losses/Writeoff									
Changes in current assets and liabilities									
Accounts Payable	\$777	\$1,164	\$1,622	\$2,392	(\$2,765)	(\$20)	\$89	\$2,734	\$528
Inventory	(\$1,681)	(\$15,054)	(\$33,094)	\$16,991	\$10,611	\$14,241	(\$26,878)	\$4,172	\$19,098
Accounts Receivable	\$3,164	(\$320)	\$49	(\$7,179)	\$3,332	(\$262)	\$4,594	(\$6,632)	(\$2,690)
Net Cash From Operations	\$7,525	\$(12,310)	(\$35,915)	\$16,090	\$18,973	\$23,752	(\$26,337)	(\$4,688)	\$29,723
Cash Flows From Investing Activities									
Plant Improvements (Net)	\$0	\$0	\$0	\$0	\$0	(\$6,816)	(\$19,872)	(\$12,240)	\$0
Cash Flows From Financing Activities									
Dividends Paid	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sales of Common Stock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Purchase of Common Stock	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Cash from Long Term Debt Issued	\$0	\$0	\$6,280	\$0	\$0	\$0	\$0	\$0	\$18,000
Early Retirement of Long Term Debt	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Retirement of Current Debt	\$0	\$0	(\$3,785)	(\$35,620)	(\$20,080)	(\$6,104)	\$0	(\$42,649)	(\$60,530)
Cash From Current Debt Borrowing	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Cash From Emergency Loan	\$0	\$3,785	\$33,420	\$20,080	\$1,704	\$0	\$36,049	\$60,530	\$13,880
Net Cash From Financing Activities	\$0	\$3,785	\$35,915	(\$15,540)	(\$18,376)	(\$6,104)	\$36,049	\$17,881	(\$28,650)
Effect of Exchange Rate	\$0	\$0	\$0	(\$549)	(\$597)	(\$512)	(\$160)	(\$953)	(\$1,073)
Net Change In Cash Position	\$7,525	(\$8,525)	\$0	\$0	\$0	\$10,320	(\$10,320)	\$0	\$0
Starting Cash Position	\$0	\$8,525	\$0	\$0	\$0	\$0	\$10,320	\$0	\$0
Closing Cash Position	\$8,525	\$0	\$0	\$0	\$0	\$10,320	\$0	\$0	\$0

Source: Capsim Competition Round Report, May, 2019.

Table 15: Cash flow tables of 8th round firms

Cast Flow Statement Survey	Andres	Baldwin	Chester	Digby	Erie	Ferris
Cash Flows From Activities						
Net Income (- loss)	\$7.791	\$16.146	\$1.260	-\$1.352	\$31.407	\$23.618
Adjustment For Non Cash Items Deprecitication	\$4.995	\$11.442	\$4.506	\$7.333	\$8.243	\$13.979
Extraordinary Gains/Losses/Writeoff	\$0	\$0	\$0	\$0	\$0	\$0
Changes in current assests and liability						
Accounts Payable	\$528	\$296	(\$9.052)	(\$1.242)	\$7.864	\$2.080
Inventory	\$19.098	(\$17.867)	\$28.977	\$36.285	(\$5.301)	(\$757)
Accounts Receivable	(\$2.690)	\$352	\$2.681	\$3.833	(\$10.982)	(\$6.462)
Net Cash From Operations	\$29.723	\$10.369	\$28.372	\$44.858	\$31.231	\$32.458
Cash Flow from Investing Activities						
Plants Improvements (Net)	\$0	\$0	\$0	(\$10.000)	(\$22.000)	(\$15.000)
Cash Flows From Financing Activities						
Dividens Paid	\$0	\$0	\$0	\$0	(\$10.822)	\$0
Sales Of Common Stock	\$0	\$0	\$0	\$0	\$0	\$11.199
Purchase of Common Stock	\$0	\$0	\$0	\$0	\$0	\$0
Cash from Long Term Debt Issues	\$18.000	\$0	\$0	\$14.290	\$6.009	\$4.464
Early Retirement of Loonmg Term Debt	\$0	\$0	\$0	\$0	\$0	\$0
Retirement of Current Debt	(\$60.530)	(\$3.304)	(\$67.199)	(\$97.430)	(\$26.264)	(\$28.394)
Cash From Current Debt Borrowing	\$0	\$3	\$0	\$0	\$33.241	\$23.947
Cash From Emergency Loan	\$14	\$0	\$39.774	\$49.420	\$0	\$0
Net Cash From Financing Activities	(\$28.650)	(\$3.301)	-	-	\$2.137	\$11.215
			\$27.426	\$33.721		
Effects of Exchange Rate	(\$1.073)	(\$1.233)	(\$947)	(\$1.137)	(\$1.663)	(\$2.048)
Net Change In Cash Position	\$0	\$5.834	\$0	\$0	\$9.706	\$26.625

Source: Capsim Competition Round Report, May, 2019.

6. Results

In this article, students' decisions and results of CAPSIM Global DNA application in a multi-game simulation are examined in accordance with global competition strategies. As a result of this simulation, the results obtained after all rounds of Andrews company can be summarized as follows:

- i. Andrews entered the 8th Rounda with 803 (223 Asmart, 580 APrime) stocks in America and 452 (121 Asmart, 331 Aprime) stocks in Asia. We also needed 60,530 USD for immediate cash. With its production capacity of 3400 units and 3 kinds of products (Asmart, Atech, Aprime), it was selling in Asia, Europe and Asia market. The automation level was also 4.0. 8. Round strategy was planned to save the company from this bad situation as much as possible. At the end of the 8th round, it was planned to run out of stock as much as possible and to overcome the financial shortage. In this context, production planning and market analysis were performed. At the end of the round, more successful results were achieved compared to the previous rounds. In terms of production capacity, it is left behind from companies in the sector except one company. Production capacity needs to be increased by taking into account the market growth. In product and market based evaluation, the products of the company are performance products. However, my aggressive attitude towards pricing has enabled our products to be sold in the budget category. Although Asmart is a performance product of our products, it has found buyers with 14% budget product performance in Europe. Atech product sold 3% below the potential (12%) in the performance category. Customer satisfaction is very high and the best quality product in performance products. However, as the product age was new, customers were hesitant or could not be successful enough in the promotion. The Atech product was sold at the highest price in proportion to the quality it deserved in Europe.
- ii. The Company's sales in the 8th round amounted to USD 157,481. Sales proceeds were ahead of two competitors and behind all three competitors. The average sales amount was 231,087 USD. In this case, 8 rounds ended with a sales revenue below average. Sales revenue in front of the

company in front of the firm's production capacity on the basis of the firm is higher than the firm and at the same time by making subcontracted production is the effect of high product numbers. Andrews outperformed other companies in terms of unit price, performance product, and inventory numbers affecting sales revenue.

- iii. EBIT (Profit before interest, tax and depreciation) generated a profit of USD 23,331. The EBIT of the companies that lagged behind the sales revenue also lagged behind. On average, it was USD 33,124 in EBIT. The company remained below average in this indicator.
- iv. Net Profit is realized as 7,791 USD. The net profit issue was also consistent with EBIT sales and EBIT. Net profit average of the sector is 13.145 USD.
- v. Urgent cash requirement decreased to USD 13,880 at the end of 8th Round. There was no urgent need for financing for the 3 firms with good sales revenue. A financial need arose below the urgent need of USD 17.179. In addition to the current debt interest rate, there is a debt of 7.5%. It is necessary to continue policy-making in the coming year, with an emphasis on cash inflows.
- vi. The company achieved 7.6% of the American market, 22% of the European market and 4.4% of the Asian market. The company manages Europe at Net Profit. It demonstrates the ability to maximize sales and minimize costs in this region in Europe. Although it also makes profits in the USA and Asia, it appears to have been a loss in net profit due to interest expenses in America. The Company owns 9.8% of the total market and shares fourth place in the sector. The company ranked second in the European market.
- vii. The Company's share value closed at USD 1.87. Book value is calculated as 7.08 USD per share. The market value of the company is USD 3.737.765. According to the starting point, our company value increased by 87%. However, this increase is not a sufficient increase compared to our competitors in the sector. However, shareholders will be happy to see such a large increase in your stock price.
- viii. Return on Equity of the Company in the 8th Round (ROE) was 55%. This ratio is the first in the sector. The sector average was 17.6% in ROE. The Company's return on assets (ROA) stood at 12.8%. The company is the second sector in ROA.
- ix. The ROA sector average is well above 8.7. Profit / Sales (ROS) was realized as 4.9%. The sector average was 4.6%.
- x. Automation level is 4.0. One competitor's 5.5 and the other competitor's automation level is 6.0. These two companies were able to reflect the advantage of automation level to their profitability as labor wages were lower. The automation levels of other companies in the sector are similar. It is important to increase automation after solving the financial problem.

When managing a business, there is no way to learn the parts of the business from books by gaining experience in complete integrity. The company's management competence requires practice with competitors in a sector such as production, marketing, R & D, finance, operations and strategy. The simplest way to practice this in the learning process is through business simulations and multi-game applications. These simulations help students to acquire workforce skills by practicing critical thinking, making better decisions and solving business problems. Business simulations have taken their place in education as a powerful teaching tool.

7. Conclusions

Simulations have long been a tool for managing improvement changes in organizations and creating a virtual reality for cause and effect modeling. Simulations give participants a much better understanding of how our business works and what they can do in their roles to have an impact on the outcome. In the global competition environment, comprehensive information can be found in the books on business management. In fact, in recent books, business stories from known international companies are supported. However, it was not possible for a student to actually experience this environment, to be a decision maker in processes, to see the results of decisions, to endure the results of right or wrong decisions, to be in a multivariate business life before simulation applications.

The easiest way to do this practice in the learning process is to work simulations and multi-game applications. These simulations help students practice critical thinking, make better decisions, and solve business problems, helping them acquire workforce skills. Work simulations have taken their place in education as a powerful teaching tool. Student teams compete with each other by running multinational businesses over several game rounds, and each round represents one financial year. International business simulation games allow students to make decisions and receive immediate feedback in a risk-free environment. During each round of simulation, students must make decisions about a company's product portfolio, pricing, advertising, production, R & D and financial structure. The international operating aspects of the games include the management of exchange rate fluctuations, trade barriers, different tax rates between countries, shipping costs and international cash management. Players should also deal with national differences in many aspects, including consumer preferences, price sensitivity, production costs, market growth rates, and economic growth. The instructors follow which decisions will be highlighted in line with the planned learning objectives of the course and advise students in the learning process. This article differs from other studies in that it is a study that puts together the application of theory and simulation in computer environment.

In this article, students' decisions and results in a multi-game simulation of CAPSIM Global DNA application are examined in accordance with global competition strategies. Students to catch competitive advantage in global markets competitive environment, competitive position, environmental factors, competitive superiority, low cost, speed, differentiation, international market, long-term plans, growth, market development, product development, innovation, withdrawal, product life curve, business analysis, business comparison with competitors, sector benchmarking issues in a competitive environment and simulation for 8 years. The students experienced a learning process in which all decisions and results such as financial results and cash flow of decisions were analyzed in an interactive, comparative way with cause and effect relations. It has been concluded that simulation technique, which is a learning process in which the theoretical knowledge in the books is tested in a practical way before starting business life, takes learning to advanced levels.

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Appendix A. Literature review summary

Author	Subject	Method	Location / Period / Data	Result	Year of publication
Yüksekbilgili, Z., & Özkeskin, G.	In this study, the use of Porter's Generic Competition Strategies Model in the Hospitality Sector was investigated.	Factor analysis of surveys.	SPSS 22.0 program was used and the data were arithmetic mean, standard deviation, frequency analysis and percentage, factor analysis and variance analysis.	When the participants evaluated the factors that could create an obstacle for a new hotel to enter the Istanbul hospitality sector, it was seen that the most important factor to prevent was the intensity of competition among the existing enterprises. The least influencing factor was as Low profit margins.	2019
Türk, H., Güler, A., & Yıldırım, B.	Working in the context of marketing strategies, for torque, which is one of Turkey's most remarkable companies have tried to analyze how the implementation of the strategic marketing planning.	SWOT Analysis.	SWOT Analysis.	The results of the study reveal that, apart from market analysis-needs, Torku's needs are prioritized by the needs of the producer partners, and that it realizes the industrial structuring that will produce every product that can be produced and can be produced in a way that meets the demands and needs of the consumers by analyzing itself and the competitors correctly.	2019
Çoskun, R., Sancakturan, K.	In the internationalization decisions, it is examined whether competitive or collaborative methods are adopted in supplier relations.	Interview was applied qualitative content analysis with MAXQDA program.		In their growth strategies, companies have based their expectations from their suppliers on traditional supplier relations such as cost, quality and timely delivery.	2019
Özdemir, A.	The aim of this study: Turkey Tourism Industry are developed is measured by Diamond Model of Porter's competitive advantage in the international arena.	Factor analysis.		Identify the key determinants that provide the country with a competitive advantage in the tourism sector and these advantages should be supported by accurate and on-site programs to ensure sustainable competitive power in the tourism sector.	2019
Daehy, Y., Krishnan, K., Alsaadi, A., & Alghamdi, S.	In this paper, we explain the reliability of each part of the system as well as the entire supply chain by using a statistical method.			The optimization approach presented in this study is to provide a suitable method that helps ensure the satisfaction of reliability requirements at the lowest possible cost.	2019
Nugent, M., & Stoyanov, S.	This study examines how useful a financial simulation can be in strengthening financial learning objectives measured by an assessment.	Simulation.	Success rates and learning degree measurement.	The results of this research will be valuable for both the faculty of finance and the learning-based assessment documentation. Getting new information on how financial incentives can improve understanding of financial concepts is critical to the success of future students.	2019
Caruso, J. V.	In this article, what business simulations are, types, benefits and limitations and how they are used are explained.	Simulation.	EXHIBIT 1 Simulation application framework, EXHIBIT 2	Business and Leadership Simulation Business simulations help students to acquire workforce skills by enabling them to practice critical thinking, make better decisions and solve business problems.	2019

Erdil, T. S	The innovation tendencies and mergers and acquisitions of the enterprises are considered as a competitive advantage.	Survey, Correlation.		As a result of mergers and acquisitions, the results of the innovation activities of the enterprises are effective in achieving a better firm performance and export performance.	2018
Toksari, M.	The study examines the key factors in achieving and achieving competitive advantage in their sectors and developing policies appropriate to real-time marketing processes through social media networks in order to make a difference.	Literature review.		Nowadays, with the change in consumer demands and needs very quickly, we are moving towards the periods in which enterprises will try to find new marketing tactics.	2018
Robert S. Rubin	Capsim Management Simulations.	-	Academy of Management Learning & Education,	-	2017
Bayraktar, Y., Kaya, H.I.	New Economy and Changing Competition: A Comparative Analysis.	-	Journal of Information Economics and Management Volume.	-	2016
Mirzayeva, G., Türkay, O.	Evaluation of Competition Strategies: A Research on Hotel Businesses in Baku.	Anova Test.	International Journal of Turkish World Tourism Research.	There is a significant difference between the wide range of products and hotel locations.	2016
Rogmans, T.	Effective Use of Business Simulation Games in International Business Courses	-	The Academy of International Business Publishes	-	2016
Keefe, M., Lang, D., Rumsey, C., True, S.	Cross Cultural Virtual Teaming: An Exploratory Approach	-	International Conference of the Institute for Business Administration in Bucharest.	-	2016
Grant, R. M.	Contemporary strategy analysis: Text and cases edition.	Keys Study	-	Primary goal in discovering competitive advantage is to bring together the two sides of our analytical framework (the industrial environment and the firm) and consider how competitive advantage positions are created and destroyed, and to analyze opportunities for cost advantage and differentiation advantage.	2016
Dereli, D. D.	Innovation management in global competition and competitive advantage.	-	-	In a global competitive environment, organizational and managerial innovations are key to success for companies. While technology and research and development activities significantly affect organizational structure and culture, correct innovation management provides a competitive advantage.	2015
Huang, K. F., Dyerson, R., Wu, L. Y., & Harindranath, G.	From temporary competitive advantage to sustainable competitive advantage.	Structural equation method (SEM)	The 415 listed companies were selected and in 2002 accounted for about 80% of the	Technological resources and talent positions enhance a better outcome of sustainable competitive advantage.	2015

			production value of the entire Taiwan information and communications technology industry.		
Taşgıt, Y.E., Ergün, E.	The Impact of Business Environment Characteristics on Business Strategy: Findings from the Service Sector.	Regression Analysis, T test	Journal of Management Sciences	H1, H2, H4 hypotheses are accepted, H3 is rejected.	2015
Gokmenoglu, S, Akai, M.	Studies on international competitiveness in literature have been compared.			Some scientists objected to Porter's theory in terms of methodology, while others emphasized that there were shortcomings in the theory, but they had proposed theories based on Porter's theory.	2012

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