







### Economie-Inovaţie-Comunicare-Universitară

# 16 th INTERNATIONAL SYMPOSIUM WORKSHOP FUTURE 4.0 VISION





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#### 16 th INTERNATIONAL SYMPOSIUM WORKSHOP

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1	MEREUT (OSIAN) Alexandra	The education we need for the economy of the
1	Maria	•
	Maria	future
2	BELL (PAUL) Ligia	The transport industry between pandemic and war
3	BOLHIS Alexandra	Analysis of the dynamics of real estate purchases
		during the pandemic period
4	ARDDELEAN (FABIAN) Sonya	Analysis of the degree of satisfaction of patients
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5	POP (BOER) Camelia Maria	Consumer satisfaction analysis
6	PIRLOG Pāuniţa	Industry 4.0 and the orientation towards
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7		Traditional education transfer to Educatin 4.0
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9	MAN (POP) Iulia	Analysis of the degree of satisfaction of the turist
		destination
10	POPESCU Simona Valeria	A vision for Education 4.0
11	BIRTOC Daniela Elena	Analysis of the factors that lead to starting a
		project for entrepreneurs
12	MOS Andra Romina	Consumer behavior analysis of eco products
		· ·
13	NECHITA Ana Călina	Analysis of the degree of satisfaction of Penny
13		customers
	OPOS Simono Lucia	
14	OROS Simona Lucia	New Industry 6.0 on the horizon

# ANALYSIS OF THE FACTORS THAT LEAD TO STARTING A PROJECT FOR ENTREPRENEURS

#### MEREUŢ (OSIAN) ALEXANDRA MARIA

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**Abstract** The Start Up Nation (SUN) program is one of the most important entrepreneurship support programs in Romania. This program offers young entrepreneurs - and not only - a real chance to start a business, benefiting from a non-refundable support of up to 200,000 lei, from the Government of Romania. Although it is a generous program that supports young entrepreneurs, a number of problems have been identified that seem to prevent the best business plans from getting funding. The present paper wants to be a barometer of the current situation with reference to the need for STRAT-UPs and the identification of the factors that lead or not to accessing the funds. Also identifying the behavior of young entrepreneurs, motivation and small hesitations that constitute a barrier for many young people. The factors taken into account in this study are: age, gender, level of education, on another level the barrier factors in their managerial education were taken into account, respectively the need for specialization courses or practical periods that constitute a positive element for the future entrepreneur. Last but not least, we took into account the elements necessary for a future authentic entrepreneur, namely the creativity in using the funds of their future business

**Keywords:** innovation, marketing, management change, quality

#### **References:**

.Florea N. V., (2014), Planul de marketing, ghid practic, Editura C.H. Beck;

Al-Awlaqi MA, Aamer AM, Habtoor N. The effect of entrepreneurship training on entrepreneurial orientation: Evidence from a regression discontinuity design on microsized businesses. Int J Manag Educ Valabil online la http://www.sciencedirect.com/science/article/pii/S1472811718302234

- Burk Woods M, (2010), Essential guide to marketing planning, second edition. Ed. Prentice Hall;
- Entrepreneurship Infographic: 46 Facts Every Entrepreneur Needs To Know About Valabila online la: https://www.dealsunny.com/blog/entrepreneurship-infographic
- http://www.info-jobs.ro/app/wp-content/uploads/articol\_L21\_105554.pd
- http://www.revistadestatistica.ro/wpcontent/uploads/2014/02/RRS\_5\_2012\_A6\_ro.pdf 2.
- http://www.revistadestatistica.ro/wpcontent/uploads/2014/02/RRS\_5\_2012\_A6\_ro.pdf 2)accesat 25.06.2023
- https://ideideafaceri.manager.ro/articole/start-in-afaceri-25/top-5-idei-de-afaceri-pentru-tinerii-incepatori-18641.html accesat 12.05.2023
- https://www.calculatorvenituri.ro/tot-ce-trebuie-să-știi-despre-antreprenoriatforme-juridice-etape-și-factori-deinfluentare) accesat 25.06.2023
- https://www.clubantreprenor.ro/2021/05/29/antreprenoriatul-si-asistentajuridica/)accesat 31.06.2023
- https://www.startupcafe.ro/fonduri-europene/fonduri-europene-antreprenorromani-debutanti-nou-program-educatie-ocupare accesat 20.05.2023
- Kotler Ph., Haider D., Rein I., (2001), "Marketingul locurilor", Editura Teora
- Porojan D., Bişa C., (2002), Planul de afaceri, concepte, metode, tehnici, proceduri, Editura: Casa de editură Irecson;
- Rodica Ivorschi, (2012), Analiza SWOT instrument managerial pentru eficientizarea activității, Romanian Statistical Review nr. 5 / 2012,

#### THE TRANSPORT INDUSTRY BETWEEN

#### PANDEMIC AND WAR

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**Abstract:** The crisis caused first by the Covid 19 pandemic, followed by the war between Ukraine and Russia, has caused real challenges throughout the world that have not been seen in the last century. Under all aspects, among which we mention the following: economic, political, social and sanitary, a multitude of decisions were recorded with a strong impact on the following generations, so that it will be difficult or even impossible for them to forget the measures imposed and the return to the life lived not in a long time ago Of course, in the multitude of decisions regarding the measures imposed in order to reduce the effects of the pandemic and the war, the economy in all its industries, including the transport industry, was also strongly affected. Because according to a publication of the Ministry of Transport we discover that "The transport industry represents over 6% of the gross domestic product (GDP) of the European Union (EU), over 6% of the workforce, 40% of the investments of the Member States and 30% of the consumption of energy from the EU" (Transportului, 2022) we can conclude that this branch of industry is important in the economy of our country, so in this paper we will refer to the impact that both the pandemic and the war have had so far on companies of road transport from Romania. This paper aims to highlight the impact that the pandemic crisis and the war between Ukraine (our neighboring country) and Russia had and unfortunately still continues to have on road transport companies in the context of the evolution of the war. The pandemic crisis has caused an economic imbalance, a low standard of living of citizens and the bankruptcy of many private sector enterprises. Taking into account that in February 2022, two years after the beginning of the pandemic crisis, the war between Ukraine and Russia also appeared, the mentioned disasters got worse. This paper aims to detail the impact that the two mentioned events had on the transport industry and how the Romanian companies operating in this sector

were affected. The present work consists of 2 chapters, one that contains two subchapters in which the state of the pandemic before 2020 and after the pandemic is analyzed and another chapter in which the case study is carried out using the two scientific methods described above.

**Keywords:** transport, consumer, brand, economic impact

#### **References:**

- Administratia bursei. (2021). Dare de seama anul 2020. *123Cargo*, Valabila online https://www.bursatransport.com/info/article/123cargobursatransport-dare-de-seama.html. accesata in 30 iunie 2023
- Agabrian, M. (2004). Cercetarea calitativă a socialului. Iași: Institutul European.
- Anghel, A. (2022). Perturbările globale și impactul lor în industria de transporturi. *GEBRÜDER WEISS*, Valabila online: https://www.gw-world.com/ro/stiri/comunicate-de-presa/stiri/gebrueder-weiss-perturbarile-globale-si-impactul-lor-in-industria-de-transporturi, accesata in 30 iunie 2023
- Ciprian Păun, F. D. (2019). Transportul rutier de mărfuri în România, afectat negativ de nivelul investițiilor în infrastructură. *Starea Națiunii*, Valabila online: http://starea-natiunii.ro/index.php/ro/25-facts-figures/263-transportul-rutier-de-marfuri-in-romania-afectat-negativ-de-nivelul-investitiilor-in-infrastructura. accesata in 30 iunie 2023
- Diaconu, M. (2021). După zece ani de creștere continuă, industria transporturilor rutiere frânează. *Ziarul Financiar*, valabila online https://www.zf.ro/companii/dupa-zece-ani-crestere-continua-industria-transporturilor-rutiere-19865453. accesata in 30 iunie 2023
- Gavriliu, C. (2023). Tehnologia "problema", dar şi soluţia în transporturi. *Deloitte România*, <a href="https://www2.deloitte.com/ro/pages/tax/articles/tehnologia-problema-dar-si-solutia-in-transporturi.html">https://www2.deloitte.com/ro/pages/tax/articles/tehnologia-problema-dar-si-solutia-in-transporturi.html</a>.
- Ministerul Investițiilor și Proiectelor Europene. (2019). *Planul de Redresare și Reziliență a României*. Bucuresti.
- Pascal, D. (2020). IRU: Deficitul de șoferi estimat pentru perioada 2020-2022 este de 40%. *Traficinfo*, <a href="https://trans.info/ro/iru-problema-lipsei-de-soferi-se-va-adanci-din-ce-in-ce-mai-mult-in-urmatorii-ani-131349">https://trans.info/ro/iru-problema-lipsei-de-soferi-se-va-adanci-din-ce-in-ce-mai-mult-in-urmatorii-ani-131349</a>.
- SafeFleet. (2021). Cum a evoluat transportul în 2020 și care sunt tendințele pentru 2021.

- Sbirn, C. (2019). Criză majoră de șoferi profesioniști. *G4media*, <a href="https://www.g4media.ro/criza-majora-de-soferi-profesionisti-transportatorii-romani-vor-putea-angaja-de-la-anul-soferi-din-nepal-india-sau-filipine.html">https://www.g4media.ro/criza-majora-de-soferi-profesionisti-transportatorii-romani-vor-putea-angaja-de-la-anul-soferi-din-nepal-india-sau-filipine.html</a>.
- Scârneci, F. (2006). Îndrumar de cercetare calitativă in științele socio-umane. Brașov: Editura Universității Transilvania.
- Trafic Media. (2020). 2020: tendinte si perspective in industria transporturilor si logisticii. *Trafic Media*, https://traficmedia.ro/2020-tendinte-si-perspective-in-industria-transporturilor-si-logisticii/.

# ANALYSIS OF THE DYNAMICS OF REAL ESTATE PURCHASES DURING THE PANDEMIC PERIOD

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**Abstract:** The changes produced against the background of the sudden installation of the pandemic in our lives, led to the redefinition of the lifestyle, learning, work, shopping, transportation, recreation and socialization. Along with these changes, the reevaluation of the spaces where we live or work every day was of particular importance. Through this paper, I wanted to analyze the trend of real estate purchases during the pandemic, especially the purchase of a house. Going through an uncertain, difficult period, I wanted to find out if the population was influenced to change their domicile or purchase a new home and if the decision was affected or not by the restrictions imposed by the pandemic. We certainly wonder how the real estate market will evolve in 2023, given all the recent changes and the current economic situation. Based on statistics and the opinions of specialists, it can be said that: The price of new real estate will stagnate this year. For the purchase of a home, it should be taken into account that prices will not register significant increases, since construction costs remained the same in the second half of 2022. Specialists predict that in 2023, costs will remain at 80%, unchanged. The demand for renting small office spaces will increase. Following the restrictions imposed by the pandemic, we have learned to adapt to the new working conditions from home as well as the digital transformations that have come along with them, and in many areas it has been found that it is better this way both from a financial and professional point of view. As a result, some companies have chosen to replace large office spaces with smaller ones, and the activity to be carried out by rotation or only on certain days of the week. The tendency is to migrate from the apartment to a house near the city. Also due to the atmosphere generated by the pandemic, the need to exchange apartments for houses outside the city will continue in 2023. The family with children will want a yard, a small green place where the children can play without feeling the need

parks or playgrounds.4. There will be interest in apartments and houses with medium and small areas. Due to the uncertainty generated by the pandemic, people will be more cautious about investments and will spend less to buy a house or apartment. For this reason, they will prefer smaller dwellings as they are easier to maintain.

**Keywords**: entepreneur, finance, customer, demand, investment

#### **References:**

- Agenția Națională de Cadastru și Publicitate Imobiliară, https://www.ancpi.ro/interes-public/, accesat la 01.05.2023.
- Chiţu Mădălina (2020), De ce preferă românii să se îndatoreze pentru o casă în loc să fie chiriași? disponibil la https://www.digi24.ro/stiri/actualitate/social/dece-prefera-romanii-sa-se-indatoreze-pentru-o-casa-in-loc-sa-fie-chiriasi-1256586, accesat la 01.05.2023.
- Cojocaru Bogdan (2021), Locuințele, din ce în ce mai scumpe. De ce se umflă piața imobiliară în loc să se prăbușească și încotro se îndreaptă? disponibil la https://www.mediafax.ro/social/de-ce-se-umfla-piata-imobiliara-in-loc-sa-se-prabuseasca-si-incotro-se-indreapta-20146979, accesat la 01.05.2023.
- Dincă Ionuţ (2022), Investiţiile imobiliare rămân oportune în Braşov, în contextul în care şi piaţa chiriilor este în creştere, disponibil la https://www.bizbrasov.ro/2022/09/26/investitii-imobiliare-brasov-piata-chirii/, accesat la 14.04.2023.
- Ghenciu Oxana (2022), *Cei 5 factori care influențează piața imobiliară pe timp de pace și război*, disponibil la https://www.blitz.ro/blog/cei-5-factori-care-influenteaza-piata-imobiliara-pe-timp-de-pace-si-razboi/, accesat la 30.04.2023.
- Ghenciu Oxana (2022), *De ce să investești în imobiliare în 2022*, disponibil la https://www.blitz.ro/blog/de-ce-sa-investesti-in-imobiliare-in-2022/, accesat la 01.05.2023.
- Ghenciu Oxana (2023), *Care vor fi prioritățile pieței imobiliare în 2023*, https://www.blitz.ro/blog/care-vor-fi-prioritatile-pietei-imobiliare-in-2023/, accesat la 30.04.2023.

- Ghiugan Alexandru (2010), *Investițiile imobiliare*, disponibil la https://pdfcoffee.com/investitii-imobiliare-pdf-free.html, accesat la 26.04.2023.
- Lazăr Ionuț, *Plasamente de capital pe piața imobiliară*, disponibil la https://www.academia.edu/35426198/Plasamente\_de\_capital\_pe\_piata\_imobiliara, accesat la 30.04.2023.
- Piaţa imobiliară în 2020, peste aşteptări, disponibil la https://www.revistabiz.ro/piata-imobiliara-in-2020-peste-asteptari/, accesat la 02.05.2023.
- Sisu Ion (2021), *Apartament în oraș sau casă în suburbie. Ce vor prefera românii după pandemie?* disponibil la https://www.wall-street.ro/articol/Real-Estate/272867/apartament-in-oras-sau-casa-in-suburbie-ce-vor-prefera-romanii-dupa-pandemie.html#gref, accesat la 02.05.2023.

### ANALYSIS OF THE DEGREE OF SATISFACTION OF PATIENTS WITH THE HEALTH SYSTEM

#### ARDELEAN FABIAN Sonya

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**Abstract.** "The specialized literature demonstrates the fact that this influences the degree of retention of patients, affects the results obtained from a medical point of view, but also the satisfaction of the medical staff, the tendency of patients to request a second opinion or to file malpractice lawsuits." (Taylor and Benger, 2004; Boudreaux and O Hea, 2003). "Health systems have evolved considerably in the last decades, the main elements that characterize them being (Prakash, 2010): the development of private medical units, benefiting from cutting-edge technology and equipment, the existence of third-party payers in the form of insurance companies, insurance houses of health or governments and the increased availability of medical information on the Internet, which generates high expectations from patients, but also the increase in the number of malpractice lawsuits as a result of obtaining unsatisfactory results. All these aspects determine the operation of medical institutions in an increasingly dynamic and competitive environment. Because of this, managers are becoming more careful in obtaining high scores in terms of patient satisfaction, with the aim of supporting the differentiation of the institution that they lead over competitors." (Otani et al, 2009; York and McCarthy, 2011). Today's patients demand time, information and answers to their questions, as well as courtesy, empathy and attention from the attending physician" (Shendurnikar and Thakkar, 2013). "Thus, patients are getting closer and closer to the consumer profile (Bell et al, 1997), and the strategies adopted by medical units to satisfy the needs of this new category of patients, require effective marketing plans, policies and practices addressed to different segments by consumers" (Chahal and Mehta, 2013). "Currently, in

Romania, medical units in the public sector face a series of difficulties in their adoption from the point of view of how the price for the services offered is determined, the budget allocation they have and the revenue targets imposed" (Berkowitz, 2011; Panait, 2011).

**Keywords:** quality, patience, behavior, perception

#### **References:**

- Bell et al, 1997 Charting Patient Satisfaction, Marketing Health Services, vol. 17, no. 2, pp. 22-29
- Berkowitz,S.(2011) Essentials of Healyh Care Marketing, 3rd ed., JonesD& Bartlett Learning, Sudbury;
- Catană, Gh.A (2009), Marketingul serviciilor de ocrotire a sănătății, editura Alma, Cluj-Napoca;
- Coculescu, B.I., Purcarea, V.L., Managementul riscului în practica curentă de laborator prin reevaluarea metodelor și procedurilor cuprinse în Protocoalele de lucru în vederea reducerii numărului erorilor asociate acestora, Editura Universitară "Carol Davila", București, 2012
- Doyle, C., Lennox, L.,Bell, D., A systematic review of evidence on the links between patient experience and clinical safety and effectiveness. BMJ, 2013, 3, 1-18, citați de Bolden, E.C. III., op.cit., p. 22
- Kotler et al, 2008 Strategic Marketing for Health Care Organizations. Building a Customer- Driven Health System, John Wiley & Sons Inc., San Francisco ProUniversitaria, Bucureşti, 2006, p. 18-20
- Purcărea, V.L., Marketingul îngrijirilor de sănătate manual universitar", Editura Universitară "Carol Davila", Bucureşti, 2010, pag. 27.
- Raţiu, M.P., Marketingul serviciilor. Abordare teoretică și instrumentală, Editura
- Rădulescu, V.(2008) Marketingul serviciilor de sănătate, Editura Uranus, Bucuresti Thomas, R.K. (2008), Health Services Marketing. A Practictioner s Guide, Springer, New York;
- Teboul J., La dinamique de qualité, Edit. D'Organisation, Paris, 1980, p. 301, citat de Popa, F., Purcărea, V.L., Purcărea, T., Raţiu, M., op. cit., p. 106.

#### **CONSUMER SATISFACTION ANALYSIS**

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**Abstract:** The main reasons why customer satisfaction is important are: loyalty and loyalty of already existing customers, increasing the number of new customers and improving the existing customer base and increasing profitability and success in the competitive market. A high degree of customer satisfaction is an important aspect for charting the company's growth direction. Thus, the more efforts are made to satisfy customer requirements, the more successful the business entity is in a competitive market. The first steps in improving customer satisfaction are based on providing feedback on the product-customer, servicecustomer relationship. By defining these relationships as precisely as possible, organizations can thus create a label of satisfied people, but also of dissatisfied people, based on clear and real opinions. Thus, these processes help organizations develop and improve over time. To improve customer satisfaction, one must find out exactly how customers feel about the organization's services or products and whether they are satisfied with the overall experience with the organization. This means that customer satisfaction levels must be monitored and measured regularly. For this purpose, two different types of information may be collected: information collected directly from customers and internal information (complaint and sales figures, customer retention, new customer trends, etc.). For this, communication with the client will have to be initiated. Given the multitude of communication channels that exist these days, getting feedback from customers has become somewhat easier and more efficient than it was two decades ago, for example. Among the most used methods for monitoring and measuring satisfaction are: simple rating system (scale from 1 to 5), rating system based on reviews (details), customer feedback surveys (long, rich answers), one-on-one interviews (talking in person).

**Keywords:** consumer, satisfaction, brand, communication

#### **References:**

- Al. Redeş, V. Petrescu, I. Răducanu, D. Al. Pleşca Merceologie industriala, Editura Eficient, Bucureşti, 1999, pag. 17
- Aurelian Simionescu, Nicolae Bud, Alexandru Bud Crizele și managementul strategic
- Balaure, Virgil (coordonator), Adăscăliței, Virgil, Bălan, Carmen, Boboc, Ștefan, Cătoiu, Iacob, Olteanu, Valerică, Pop, Nicolae Al., Teodorescu, Nicolae, Marketing, ediția a II-a revăzută și adăugită, Editura Uranus, București, 2003.
- Bruhn, Manfred, Orientarea spre clienți. Temelia afacerii de succes, Editura Economică, București, 2001.
- Iacob Catoiu, N. Teodorescu *Comportamentul consumatorului*, Editura Economica, București, 1999, pag. 23
- Kotler, Philip, Managementul marketingului, Editura Teora, București, 1997.
- Kotler, Philip, Marketing de la A la Z. 80 de concepte pe care trebuie să le cunoască orice manager, Editura Codecs, București, 2004.
- Laurențiu Mihai Treapăt Soluții de consolidare a brandului corporativ prin managementul riscurilor valabil online https://www.academia.edu/27807496/Solu%C8%9Bii\_de\_consolidare\_a\_bra ndului\_corporativ\_prin\_managementul\_riscurilor/accesat in 13 iunie 2022
- Lidia Maria Vaicum *Biodegradabilitatea detergenților*, Editura Academiei Republicii Socialiste Romania, București, 1971, pag. 16
- Nicolae, V. (coordonator) Studiu privind producția si comercializarea produselor de spălat si de curățire pe piața românească, Centrul Roman de Comerț Exterior, București, 1996
- Nita Dobrota (coord.) *Economie politica*, Editura economica, București, 1995, pag. 79
- Philip Kotler, John Saunders, Gary Armstrong, Veronica Wong *Principiile marketingului*, Editura Teora, Ediția Europeana, București, 1998, pag. 239
- Philip Kotler, Kevin Lane Keller (2008), Managementul marketingului https://www.researchgate.net/publication/225084026\_Marketing\_Manageme nt/accesat in 13 iunie 2022
- Revista Capital, nr. 45, 8 nov. 2001, pag. 12
- Revista de Comert, nr. 6, an I, iunie 2000, pag. 13

- S. Atanasiu, E. Jelescu *Detergenții si alți agenți de suprafață*, Editura Tehnica, București, 1959, pag. 98
- Stanciu, E. Paraianu, I. Schileru Merceologie-Calitatea si sortimentul mărfurilor nealimentare, Editura Oscar Print, București, 1998, pag. 207
- Stanciu, Sică, Marketing, Editura Cartea Universitară, București, 2006.
- Stela Florescu *Aditivi si sisteme de condiționare pentru detergenți. Performante si coeficienți,* Universitatea din București, Facultatea de Chimie, 2000, pag. 10
- Zaharia, Răzvan, Cruceru, Anca, Gestiunea forțelor de vânzare, Editura Uranus, București, 2002.

# INDUSTRY 4.0 AND THE ORIENTATION TOWARDS SUSTAINABILITY

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**Abstract:** The advent of Industry 4.0 is meant to help businesses of all sizes learn and implement various means to make the best use of their resources. Although small and medium-sized enterprises may be on a different trajectory in this transition, purely for economic reasons, Industry 4.0, with the Internet of Things as the driver of its core functionality, is inherently scalable, which will ultimately, businesses to be more profitable and their resources to be more sustainable. In addition to environmental aspects, sustainability in manufacturing also means the ability to continue to manufacture products that meet customer needs. Many small and medium-sized businesses lack the margins for error or scale that can protect large corporations, so reducing waste, better energy use and better quality through more sustainable manufacturing practices can help them grow their revenue and reduce their risks. Foremost among these benefits is sustainability. The benefits derived from the ability to use artificial intelligence (AI), machine learning (ML) and cloud-related sensing technology will all lead to energy saving practices with demonstrable efficiency, plus better ways to replace and overcome technologies old, aging, wasteful and polluting. However, the industry must continue to produce and grow exponentially to meet increasing demands for food, energy and manufactured goods to meet the multiple needs of a growing global population. But they need to do this more efficiently, which is a fundamental premise of the transition to Industry 4.0.

**Keywords:** Industry 4.0, sustainability, artifcal intelligence, management change

#### **References**

Cerezo-Narváez, A.; García-Jurado, D.; González-Cruz, M.C.; Pastor-Fernández, A.; Otero-Mateo, M.; Ballesteros-Pérez, P. Standardizing Innovation Management: An Opportunity for SMEs in the Aerospace Industry. *Processes* **2019**, *7*, 282. [Google Scholar] [CrossRef]

- Huang, C.J.; Chicoma, T.; Denisse, E.; Huang, Y.H. Evaluating the Factors that are Affecting the Implementation of Industry 4.0 Technologies in Manufacturing MSMEs, the Case of Peru. *Processes* **2019**, *7*, 161. [Google Scholar] [CrossRef]
- Huh, J.-H.; Kim, K.-Y. Time-Based Trend of Carbon Emissions in the Composting Process of Swine Manure in the Context of Agriculture 4.0. *Processes* **2018**, *6*, 168. [Google Scholar] [CrossRef]
- Imran, M.; Salisu, I.; Aslam, H.D.; Iqbal, J.; Hameed, I. Resource and Information Access for SME Sustainability in the Era of IR 4.0: The Mediating and Moderating Roles of Innovation Capability and Management Commitment. *Processes* **2019**, *7*, 211. [Google Scholar] [CrossRef]
- Jung, S.; Yoon, Y.T. Optimal Operating Schedule for Energy Storage System: Focusing on Efficient Energy Management for Microgrid. *Processes* **2019**, *7*, 80. [Google Scholar] [CrossRef]
- Ko, J.S.; Huh, J.H.; Kim, J.C. Improvement of Temperature Control Performance of Thermoelectric Dehumidifier Used Industry 4.0 by the SF-PI Controller. *Processes* **2019**, *7*, 98. [Google Scholar] [CrossRef]
- Lee, H. Effective Dynamic Control Strategy of a Key Supplier with Multiple Downstream Manufacturers Using Industrial Internet of Things and Cloud System. *Processes* **2019**, *7*, 172. [Google Scholar] [CrossRef]
- Müller, J.M.; Däschle, S. Business Model Innovation of Industry 4.0 Solution Providers Towards Customer Process Innovation. *Processes* **2018**, *6*, 260. [Google Scholar] [CrossRef]
- Paolini, V.; Petracchini, F.; Carnevale, M.; Gallucci, F.; Perilli, M.; Esposito, G.; Frattoni, M. Characterisation and cleaning of biogas from sewage sludge for biomethane production. *J. Environ. Manag.* **2018**, *217*, 288–296. [Google Scholar] [CrossRef] [PubMed]
- Pari, L.; Scarfone, A.; Santangelo, E.; Gallucci, F.; Spinelli, R.; Jirjis, R.; Barontini, M. Long term storage of poplar chips in Mediterranean environment. *Biomass Bioenergy* **2017**, *107*, 1–7. [Google Scholar] [CrossRef]
- Park, S.; Huh, J.H. Effect of Cooperation on Manufacturing IT Project Development and Test Bed for Successful Industry 4.0 Project: Safety Management for Security. *Processes* **2018**, *6*, 88. [Google Scholar] [CrossRef]

- Parv, L.; Deaky, B.; Nasulea, M.D.; Oancea, G. Agent-Based Simulation of Value Flow in an Industrial Production Process. *Processes* **2019**, *7*, 82. [Google Scholar] [CrossRef]
- Pereira, P.; Cerda, A.; Martin, D.; Úbeda, X.; Depellegrin, D.; Novara, A.; Miesel, J. Short-term low-severity spring grassland fire impacts on soil extractable elements and soil ratios in Lithuania. *Sci. Total Environ.* **2017**, *578*, 469–475. [Google Scholar] [CrossRef] [PubMed][Green Version]
- Reis, M.S. Multiscale and Multi-Granularity Process Analytics: A Review. *Processes* **2019**, *7*, 61. [Google Scholar] [CrossRef]
- Rodrigo-Comino, J.; Cerdà, A. Improving stock unearthing method to measure soil erosion rates in vineyards. *Ecol. Indic.* **2018**, *85*, 509–517. [**Google Scholar**] [CrossRef][Green Version]

#### TRADITIONAL EDUCATION TRANSFER TO EDUCATIN 4.0

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Abstract: The rapid evolution of technology makes it necessary for education to keep up. Mechanical and repetitive jobs were taken over by machines. So the new labor market now demands that people focus on ingenuity, on understanding and creating new things. Companies must get involved in the education of the future generation of employees, say more and more people from the business environment, and some are taking the step towards education, not only by opening internship programs, but even through alternative schools. Companies must support education training. Specialists cannot be trained by an anachronistic education system. Companies must open up, offer their knowledge to teachers so that they can be adapted to the new requirements of employers. We live in a time full of changes, the "fourth industrial revolution" or simply "industry 4.0". This fourth industrial revolution is fundamentally different from its predecessors. It is a revolution of networks, platforms, people and digital technology.

**Keywords:** Education 4.0, Industry 4.0, management change

#### References

- Bacigalupo, M. Entrepreneurship as a competence. In *World Encyclopedia of Entrepreneurship*; Edward Elgar Publishing: Cheltenham, UK, 2021. [Google Scholar]
- Bonfield, C.A.; Salter, M.; Longmuir, A.; Benson, M.; Adachi, C. Transformation or Evolution? Education 4.0, Teaching and Learning in the Digital Age. *High*. *Educ. Pedagog.* **2020**, *5*, 223–246. [Google Scholar] [CrossRef]
- Chaka, C. Skills, Competencies and Literacies Attributed to 4IR/Industry 4.0: Scoping Review. *IFLA J.* **2020**, *46*, 369–399. [Google Scholar] [CrossRef]
- Daher, W.; Awawdeh Shahbari, J. Design of STEM Activities: Experiences and Perceptions of Prospective Secondary School Teachers. *Int. J. Emerg. Technol. Learn.* **2020**, *15*, 112. [Google Scholar] [CrossRef][Green Version]

- García Vaquero, M.; Sánchez-Bayón, A.; Lominchar, J. European Green Deal and Recovery Plan: Green Jobs, Skills and Wellbeing Economics in Spain. *Energies* **2021**, *14*, 4145. [Google Scholar] [CrossRef]
- González-Salamanca, J.C.; Agudelo, O.L.; Salinas, J. Key Competencies, Education for Sustainable Development and Strategies for the Development of 21st Century Skills. A Systematic Literature Review. *Sustainability* **2020**, *12*, 10366. [Google Scholar] [CrossRef]
- Himmetoglu, B.; Aydug, D.; Bayrak, C. Education 4.0: Defining the teacher, the student, and the school manager aspects of the revolution. *Turk. Online J. Distance Educ.* **2020**, *21*, 12–28. [Google Scholar] [CrossRef]
- Hong, C.; Ma, W.W.K. (Eds.) Introduction: Education 4.0: Applied Degree Education and the Future of Work. In *Applied Degree Education and the Future of Work*; Lecture Notes in Educational Technology; Springer: Singapore, 2020; pp. 1–13. ISBN 9789811531415. [Google Scholar]
- Karlos de Sousa Oliveira, K.; André Cavalcante de Souza, R. Habilitadores Da Transformação Digital Em Direção à Educação 4.0. *Renote* **2020**, *18*, 1. [Google Scholar] [CrossRef]
- Miranda, J.; Navarrete, C.; Noguez, J.; Molina-Espinosa, J.-M.; Ramírez-Montoya, M.-S.; Navarro-Tuch, S.A.; Bustamante-Bello, M.-R.; Rosas-Fernández, J.-B.; Molina, A. The Core Components of Education 4.0 in Higher Education: Three Case Studies in Engineering Education. *Comput. Electr. Eng.* **2021**, *93*, 107278. [Google Scholar] [CrossRef]
- Ramírez-Montoya, M.S.; Álvarez-Icaza, I.; Sanabria-Zepeda, J.C.; López-Caudana, E.O.; Alonso, P.E.; Miranda, J. Scaling Complex Thinking for Everyone through Open Science: A Conceptual Methodological Framework. In Proceedings of the 9th International Conference on Technological Ecosystems for Enhancing Multiculturality TEEM21, Barcelona, Spain, 26–29 October 2021; University of Barcelona: Barcelona, Spain, 2021; pp. 806–811. [Google Scholar]
- Rayna, T.; Striukova, L. Fostering Skills for the 21st Century: The Role of Fab Labs and Makerspaces. *Technol. Forecast. Soc. Chang.* **2021**, *164*, 120391. [Google Scholar] [CrossRef]
- Santos, A.F.; Barber III, D.; Harris, M.; Haymore, J. What Can Universities Learn From Organizational Creative Space Design Research? A Look at Maker Spaces. *JHETP* **2021**, *21*. [Google Scholar] [CrossRef]

- Seufert, C.; Oberdörfer, S.; Roth, A.; Grafe, S.; Lugrin, J.-L.; Latoschik, M.E. Classroom Management Competency Enhancement for Student Teachers Using a Fully Immersive Virtual Classroom. *Comput. Educ.* **2022**, *179*, 104410. [Google Scholar] [CrossRef]
- Shirazi, F.; Hajli, N. IT-Enabled Sustainable Innovation and the Global Digital Divides. *Sustainability* **2021**, *13*, 9711. [Google Scholar] [CrossRef]
- Sifaki, E.; Petousi, V. Contextualising Harm in the Framework of Research Misconduct. Findings from Discourse Analysis of Scientific Publications. *IJSD* **2020**, *23*, 149. [Google Scholar] [CrossRef]
- Wong, C.; Shih, Y. Enhance STEM Education by Integrating Product Design with Computer-Aided Design Approaches. *CADandA* **2021**, *19*, 694–711. [Google Scholar] [CrossRef]

# ANALYSIS OF CUSTOMERS' BEHAVIOR IN THE SELECTION OF TOURIST DESTINATIONS

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**Abstract**. Tourism constitutes one of the major industries globally, bringing significant income to host countries and providing numerous employment opportunities. Therefore, the impact of tourism on employment is a topic of major interest to economists, entrepreneurs and governments. First, tourism has a significant effect on job creation. This industry requires a diverse range of services such as transportation, accommodation, restaurants, entertainment and other related activities. Therefore, tourism can create employment opportunities in various sectors such as hospitality, restaurants, transport, cultural tourism and adventure tourism. Tourism can also generate new employment prospects in regions with limited development or in rural areas. These regions frequently face insufficient economic resources and a high unemployment rate. Thus, the development of tourism can represent a crucial source of income for these communities and can contribute to improving the quality of life. On the downside, tourism can lead to an increase in temporary employment. In many situations, the jobs generated by the tourism industry are seasonal or temporary in nature, which can be a challenge for those looking for stability and security in a job. This instability can be especially problematic for employees who have families and financial responsibilities. In addition, tourism can lead to an increase in remuneration for certain categories of employees, while others may be paid below the minimum wage or may be exploited. In many situations, workers in the tourism industry may be exposed to poor working conditions, such as long working hours, low wages and pressure to provide high quality services. These aspects can be ameliorated through government regulations and ethical business practices.

**Keywords:** digital tools, market, satisfaction customers, quality

#### References

- Pîrvu, R. (2015). Turism internațional, Editura Universitaria, Craiova.
- Gruia.R. (2017). Management și Dezvoltare în Industria Turismului, Editura Lux Libris, Brașov.
- Aksenov, P., Kemperman, A., & Arentze, T. (2016). A Personalised Recommender System for Tourists on City Trips: Concepts and Implementation. In De Pietro, G., Gallo, L., Howlett, R.J., Jain, L.C. (eds): *Intelligent Interactive Multimedia Systems and Services 2016*, Springer International Publishing Switzerland, 525-535.
- Arentze, T., Kemperman, A. & Aksenov, P. (2018). Estimating a latent-class user model for travel recommender systems. *Information Technology & Tourism*, 19(1-4), 61-82.
- Beritelli, P., Reinhold, S., & Laesser, C. (2020). Visitor flows, trajectories and corridors: Planning and designing places from the traveler's point of view. *Annals of Tourism Research*, 82, https://doi.org/10.1016/j.annals.2020.102936.
- Cherchi, E., & Hensher, D. A. (2015). Workshop synthesis: Stated preference surveys and experimental design, an audit of the journey so far, and future research perspectives. *Transportation Research Procedia*, 11, 154–164.
- Gretzel, U. & Koo, C. (2021). Smart tourism cities: a duality of place where technology supports the convergence of touristic and residential experiences. *Asia Pacific Journal of Tourism Research*, *26*(4), 352-364.
- Grigolon A.B., Kemperman A.D.A.M., & Timmermans, H.J.P. (2012a). Exploring interdependencies in students' vacation portfolios using association rules. *European Journal of Tourism Research*, *5*(2), 93-105.
- Grigolon A.B., Kemperman A.D.A.M., & Timmermans, H.J.P. (2012b). The influence of low-fare airlines on vacation choices of students: Results of a stated portfolio choice experiment. *Tourism Management*, *33*, 1174-1184.
- Grigolon A.B., Kemperman A.D.A.M., & Timmermans, H.J.P. (2012c). Student's vacation travel: A reference dependent model of airline fares preferences. *Journal of Air Transport Management*, 18(1), 38-42.
- Grigolon, A. (2013). Modeling Recreation Choices over the Family Lifecycle. Ph.D Thesis, Eindhoven University of Technology, Eindhoven.

- Kemperman, A. (2021). A review of research into discrete choice experiments in tourism – Launching the Annals of Tourism Research curated collection on discrete choice experiments in tourism. Annals of Tourism Research, 87, https://doi.org/10.1016/j.annals.2020.103137.
- Kemperman, A., Arentze, T., & Aksenov, P. (2019). Tourists' City Trip Activity Program Planning: A Personalized Stated Choice Experiment. In Artal-Tur, A., Kozak, N., Kozak, M. (eds): *Trends in Tourist Behavior: New Products and Experiences in Europe*, Springer, Springer Nature Switzerland
- Li, J., Xu, L., Tang, L., Wang, S., & Li, L. (2018). Big data in tourism research: A literature review. *Tourism Management*, 68, 301-323.
- Randle, M., Kemperman, A., & Dolnicar S. (2019). Making cause-related corporate social responsibility (CSR) count in holiday accommodation choice. *Tourism Management*, 75, 66-77.
- Ritchie, B.W., Kemperman, A., & Dolnicar, S. (2021). Which types of product attributes lead to aviation voluntary carbon offsetting among air passengers? *Tourism Management, 85, https://doi.org/10.1016/j.tourman.2020.104276*.
- Rodríguez, B., Molina, J., Pérez, F., & Caballero, R. (2012). Interactive design of personalised tourism routes. *Tourism Management*, 33(4), 926-940.

# ANALYSIS OF THE DEGREE OF SATISFACTION OF THE ROMANIA POST CUSTOMERS

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Abstract Through the effort and involvement of generations of postmen, the Romanian National Post Company is, in the perception of Romanians, the binder of communication and information at the interpersonal and community level, but also the link with the "outside" or "home". At the beginning of the 20th century, the country's economic and cultural development was linked to the state of the Post Office, as all communication activities practically depended on the postal service. The real opportunities to consolidate the position of the Romanian Post on the Romanian market and, why not, the expansion on the external, regional market, appeared with the transition to the market economy, the digital revolution that supports speed, efficiency, costumization of services but also with globalization. The strategic planning process started within the Romanian Post has as its objective the delivery, at the level of the managerial and decision-making structures within the Romanian Post and the majority shareholder, the Romanian State through the Ministry of Research, Innovation and Digitization, of information related to the needs and requirements of Romanian customers and society, as a whole, as well as ways, methods, directions, decisions, actions and mechanisms through which the Romanian Post can maintain its traditional role and place, but also progress and function eze as a performing economic agent and useful to the society it serves. The vast process of consultation and development of strategic planning, through the contribution of all those involved, from shareholders, employees, union, to customers, collaborators, etc., will ensure the basis for the decisions of the company's management in its evolution and further development.

**Keywords:** distribution chanels, quality management, management change

#### References

- Albu Alexandru, *Marketing*, Editura Didactică și Pedagogică, București, 1975
- Bacanu Bogdan, Management strategic, Editura Teora, București, 1999
- Bruhn Maufred, Marketing general, Editura Economica, București, 1999
- Burdus Eugen, Managementul schimbării organizaționale, Editura Economica, București, 2000
- Catana Gheorghe Alexandru, *Marketing*, *filozofia succesului de piață*, Editura Dacia, Cluj Napoca, 2003
- Caraiani Gheorghe, Pricina Lucian, *Marketingul și managementul în activitatea de transporturi*, Editura Lumina Lex, București, 2002
- Certo C. Samuel, Managementul modern, Editura Teora, București, 2002
- Constantinescu Dan Anghel, *Management strategic*, Colecția Națională, București, 2000
- Czinkota, Ronkainen I., Moffen M., Interucțional Business, The Dryden Press, 1966
- Draghici Constantin, Mihai Daniela, *Managementul relațiilor cu furnizorii*, Editura Sitech, Craiova, 2008
- Ghibutu Agnes, Serviciile si dezvoltarea, Editura Expert, București, 2000
- Gradinaru Dorulet, *Managementul serviciilor*, Editura Universitatii din Pitești, 2002
- Harrington H. James, Harrington S. James, *Management total în firma secolului* 21, Editura Teora, București, 2000
- Hinescu Arcadie, *Marketing general*, Editura Universitatii "1 Decembrie 1918", Alba Iulia, 2005
- Kotler Philip, Managementul marketingul, Editura Teora, București, 2000
- Maxim Emil, Gherasim Toader, Marketing, Editura Economica, Bucuresti, 2000
- Manole Victor, Stoian Mirela, Stanciu Tolea Claudia, *Marketing*, Editura Universitatii din Piteşti, 2005
- Meghisan Flaviu, *Strategii concurențiale de marketing*, Editura Universitaria, Craiova, 2008
- Meghisan Gheorghe, Stancu Ion, Meghisan Georgeta-Madalina, *Cercetări de marketing*, Editura Sitech, Craiova, 2008
- Pop Al. Nicolae, Evangueliy D. Andronov, Kouzmanova Mariana, Lefter Constantin, Schmengler J. Hans, *Marketing strategic*, Editura Economica, Bucureşti, 2000

https://ziarullumina.ro/societate/timp-liber/din-istoricul-postei-78770.html/https://www.posta-romana.ro/a1397/stiri/posta-romana-obtine-fonduri-nerambursabile-de-260000-de-dolari-pentru-imbunatatirea-calitatii-serviciilor.html

https://www.creeaza.com/familie/diverse/SCURT-ISTORIC-AL-POSTEI399.php https://www.posta-romana.ro/cnpr data/\_editor/files/PLAN%20DE%20MANAGEMENT%20CNPR%202020-2025.pdf

Poșta Română clasată înaintea altor state puternice în topul mondial al Uniunii Poștale Universale (posta-romana.ro)

#### A VISION FOR EDUCATION 4.0

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Abstract: The development of online education and a hybrid between the classic and the digital formula must be done at the same time as ensuring the Internet connection and the devices. Digital literacy is no longer in the "nice to" area, but has moved into the "need to" area, as most jobs involve at least a digital component. It is thus an opportunity for teachers as well as students and parents not to ignore this critical component of the present and the future. Technology does not have to replace the teacher, but can augment his work and ability. We live in a time full of changes, the "fourth industrial revolution" or simply "industry 4.0". This fourth industrial revolution is fundamentally different from its predecessors. It is a revolution of networks, platforms, people and digital technology", believe the organizers, who rely on a transfer of knowledge between specialists from large companies and those from education.

**Keywords:** Education 4.0, education on-line, management change, culture management

#### References

- Aziz Hussin, A. Education 4.0 Made Simple: Ideas For Teaching. *IJELS* **2018**, *6*, 92. **[Google Scholar] [CrossRef)**.
- Bonfield, C.A.; Salter, M.; Longmuir, A.; Benson, M.; Adachi, C. Transformation or Evolution? Education 4.0, Teaching and Learning in the Digital Age. *High*. *Educ. Pedagog.* **2020**, *5*, 223–246. [Google Scholar] [CrossRef]
- Chaka, C. Skills, Competencies and Literacies Attributed to 4IR/Industry 4.0: Scoping Review. *IFLA J.* **2020**, *46*, 369–399. [Google Scholar] [CrossRef]
- Ciolacu, M.; Tehrani, A.F.; Beer, R.; Popp, H. Education 4.0—Fostering Student's Performance with Machine Learning Methods. In Proceedings of the 2017 IEEE 23rd International Symposium for Design and Technology in Electronic Packaging (SIITME), Constanta, Romania, 2017; pp. 438–443. [Google Scholar]
- Fadel, C.; Bialik, M.; Trilling, B.; Schleicher, A. Four-Dimensional Education: The Competencies Learners Need to Succeed; Center for Curriculum Redesign: Boston, MA, USA, 2015; ISBN 978-1-5186-4256-2. [Google Scholar]

- García Vaquero, M.; Sánchez-Bayón, A.; Lominchar, J. European Green Deal and Recovery Plan: Green Jobs, Skills and Wellbeing Economics in Spain. *Energies* **2021**, *14*, 4145. [Google Scholar] [CrossRef]
- González-Salamanca, J.C.; Agudelo, O.L.; Salinas, J. Key Competencies, Education for Sustainable Development and Strategies for the Development of 21st Century Skills. A Systematic Literature Review. *Sustainability* **2020**, *12*, 10366. [Google Scholar] [CrossRef]
- Himmetoglu, B.; Aydug, D.; Bayrak, C. Education 4.0: Defining the teacher, the student, and the school manager aspects of the revolution. *Turk. Online J. Distance Educ.* **2020**, *21*, 12–28. [Google Scholar] [CrossRef]
- Hong, C.; Ma, W.W.K. (Eds.) Introduction: Education 4.0: Applied Degree Education and the Future of Work. In *Applied Degree Education and the Future of Work*; Lecture Notes in Educational Technology; Springer: Singapore, 2020; pp. 1–13. ISBN 9789811531415. [Google Scholar]
- Miranda, J.; Navarrete, C.; Noguez, J.; Molina-Espinosa, J.-M.; Ramírez-Montoya, M.-S.; Navarro-Tuch, S.A.; Bustamante-Bello, M.-R.; Rosas-Fernández, J.-B.; Molina, A. The Core Components of Education 4.0 in Higher Education: Three Case Studies in Engineering Education. *Comput. Electr. Eng.* **2021**, *93*, 107278. [Google Scholar] [CrossRef]
- Morin, E.; Pakman, M. *Introducción al Pensamiento Complejo*; Gedisa: Barcelona, Spain, 2011; ISBN 978-84-7432-518-8. [Google Scholar]
- Ramírez-Montoya, M.S.; Álvarez-Icaza, I.; Sanabria-Zepeda, J.C.; López-Caudana, E.O.; Alonso, P.E.; Miranda, J. Scaling Complex Thinking for Everyone through Open Science: A Conceptual Methodological Framework. In Proceedings of the 9th International Conference on Technological Ecosystems for Enhancing Multiculturality TEEM21, Barcelona, Spain, 26–29 October 2021; University of Barcelona: Barcelona, Spain, 2021; pp. 806–811. [Google Scholar]
- Santos, A.F.; Barber III, D.; Harris, M.; Haymore, J. What Can Universities Learn From Organizational Creative Space Design Research? A Look at Maker Spaces. *JHETP* **2021**, *21*. [Google Scholar] [CrossRef]
- Seufert, C.; Oberdörfer, S.; Roth, A.; Grafe, S.; Lugrin, J.-L.; Latoschik, M.E. Classroom Management Competency Enhancement for Student Teachers Using a Fully Immersive Virtual Classroom. *Comput. Educ.* **2022**, *179*, 104410. [Google Scholar] [CrossRef]
- Shirazi, F.; Hajli, N. IT-Enabled Sustainable Innovation and the Global Digital Divides. *Sustainability* **2021**, *13*, 9711. [Google Scholar] [CrossRef]
- Wong, C.; Shih, Y. Enhance STEM Education by Integrating Product Design with Computer-Aided Design Approaches. *CADandA* **2021**, *19*, 694–711. [Google Scholar] [CrossRef]

# THE EDUCATION WE NEED FOR THE ECONOMY OF THE FUTURE

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**Abstract:** We live in a time of change. The "fourth industrial revolution" or, more simply, "industry 4.0", which is fundamentally different from its predecessors, is a revolution of networks, platforms, people and digital technology, which makes it necessary for education to keep up. Mechanical and repetitive jobs were taken over by machines. So the new labor market now demands that people focus on ingenuity, on understanding and creating new things. Companies must support education training, because specialists cannot be trained by an anachronistic education system. Companies must open up, offer their knowledge to teachers, so that they can be adapted to the new requirements of employers. In this context, together with the most enthusiastic promoters of education in Romania, we will debate the topic of the talent crisis directly related to the inefficiency of the educational system and propose alternative solutions to the current situation. The Internet era solved the essential problem of cultural memory (information storage) and democratized access to a terrifying volume of data. We lose our discernment and destroy the respite needed for reflection. The remedies are increasingly clear: inner training and collaborative intellectual production.

**Keywords**: Industry 4.0, Education 4.0, educational forms, continuing education

#### **References:**

Ioan Bontaș – Pedagogie, EDP, București, 1997;

Leon Topa – Sociologia educației permanente, 1973;

Dumitriu E. – Finalitățile educației, EDP, București, 1982;

Ioan Jinga – Educația permanenta,<br/>Editura Științifică și enciclopedică, București, 1979;

Paul Lengrad – Introducere în educația permanentă, EDP, București, 1973.

Cristea S. – Managementul organizației școlare, EDP, București, 1996;

Țoca Ioan – Management educațional, EDP, București, 2002;

Cojocaru Venera Mihaela – Management educațional vol1, Editura Universității Lucian Blaga, Sibiu, 2006.

#### CONSUMER BEHAVIOR ANALYSIS OF ECO PRODUCTS

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**Abstract:** The social, economic and political changes after the Second World War, the unprecedented growth of industry, the practice of intensive agriculture, environmental pollution have recognized over time to develop measures to deal with the negative impact on consumers in the field of food and the needs in the field of environmental protection acquired, through the scale of its manifestations and the depth of its consequences, a global and permanent impact. The obvious impact of agricultural activities on the quality of the environment causes people to pay more and more attention to the compatibility between the two terms of the equation, that is, to reduce the negative impact of agriculture while developing its agro-ecological functions. In addition to being an absolute necessity for survival, food is also the meeting point of a multitude of symbolic norms: personal, familial, cultural, biological, industrial, environmental, and moral and social. There is a growing interest in high-quality food, exacerbated by recent food scandals (Salmonella, E. Coli, BSE, GMOs, etc.). More and more people point out that the "industrial society" is moving towards the "risk society", which is characterized by the recognition of the potentially destructive and negative effects of scientific and technological development. In recent years, it has become a common practice to establish a system for monitoring and guaranteeing the quality of agricultural products. Among these monitoring systems, testing consumer opinions and reactions to food quality is one of the most effective tools. Research in this field is interdisciplinary in nature, involving multiple methodologies and quantitative and qualitative data collection and analysis techniques. Investigating the consumption of organic (green) products is a relatively new topic, and the number of studies is increasing significantly with increasing market demands and rapid economic and social transformation in Central and Eastern Europe. Research reports address

consumers and green products, product demand, dietary changes, consumer perceptions and attitudes, consumer concerns about ethical principles of production and marketing, environment, welfare, public health.

**Keywords:** social services, information, prevention, combat

#### **References:**

Abric, J., C., 2002, Psihologia comunicării, Editura Polirom, Iași

Chelcea, S., Mărginean, I., Cauc, I., 1998, Cercetarea sociologică. Metode și tehnici, Editura Destin, Deva

FNAE, 2004 a, Euronews 92, 25 iunie.

FNAE, 2004 b, Euronews 103, 14 noiembrie

Giddens, A., Turner, I., 1987, Social Theory Today, Stanford.96

Hansen, J., 2003, Organic farming is a small but dynamic activity in EU, Organic Farming - Statistics in focus nr. 5, Eurostat

Ion Bucată V., L.I., Diaconescu Şt., Gieraths J, Weiller W, 2003, Agricultura ecologică, Ed. Alma Mater, București.

James A, 1993, Eating Green(s). Discourse on Organic Food. In Milton K. (ed): Environmentalism. The View from Anthropology. ASA Monographs 32:203-218, London, Routledge

Mărginean, I., 2000, Proiectarea cercetării sociologice, Editura Polirom, Iași.

Nediță Gabriela, Nițu A., Martinoff Ioana, Stoian Mirela, 2003, Studiu de piață privind cererea și oferta de produse agroalimentare ecologice românești, Rev. Fermierul, nr.122, februarie, 11-13.

Nestle M., 2003, Safe Food: Bacteria, Biotechnology and Bioterrorism. Berkley: University of California Press.

Rotariu, T., Iluţ P., 1997, Ancheta sociologică și sondajul de opinie, Editura Polirom, Iași.

Ștefănescu, S.,L., 2004, Raport III de progres la Sub-Proiectul Platforma intersectorială de ecologizare a resureslor și producției indigene de legume proaspete destinată pieței municipale, Proiect SSA, UMP-MAPDR, Banca Mondială.

Ştefănescu, S.,L., Unteşu Fineta, 2004, Resurse, oportunități și constrângeri în producerea și desfacerea legumelor ecologice proaspete pe piața municipală, Ed. Estfalia, București.

- Ștefănescu, S., L, Paranici B., Gheorghe M., 2003, Norme și reglementari pentru ecoferme certificate, Ed. Estfalia, București.
- Torjusen Hanne, Sangstad Lotte, O'Doherty Jensen Katherine, Kjernes Umni, 2004, European Consumers' Conceptions of Organic

### ANALYSIS OF THE DEGREE OF SATISFACTION OF PENNY CUSTOMERS

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**Abstract:** In this paper we have carried out an analysis of the degree of consumer satisfaction. The case study analyzes the customer satisfaction of the Penny store chain in Romania, owned by the German company REWE GROUP, a company that has been active on the Romanian market since 2005 and has opened 338 stores to date and operates with over 5,800 employees. Any company carries out its activity with the external environment. This environment presents competitors, which causes organizations to be in a continuous rise. The objective of any organization is to obtain profit, which is why quality improvement is in continuous development. Concerns for quality, which appeared in very ancient times, registered an acceleration in the 20th century, a period in which there was an evolution of concepts and actions related to quality. At the enterprise level, the starting point of activities is the identification and satisfaction of customers. Thus, quality is defined by consumer requirements. The work contains two parts, the theoretical part and the practical part. In the first part, I presented some theoretical aspects regarding Quality Management, management improvement and customer orientation - the key to success. The second part of the paper includes the case study carried out on 100 clients, from where we drew some conclusions regarding the result of profit through quality.

**Keywords:** *financial situation, behavior, absenteeism, poverty.* 

#### References

https://www.academia.edu/23521127/Satisfacerea\_nevoilor\_clientului\_M1\_Satisfacerea\_nevoilor\_clientului

- https://moodle.fspac.ubbcluj.ro/pluginfile.php/10155/course/overviewfiles/Curs% 20Managementul%20calitatii%20%28ID%29.pdf?forcedownload=1
- https://www.tribuna.ro/stiri/economie/managementul-calit-a-tii-totale-23273.html
- https://www.scribd.com/document/450290239/GESTIONAREA-RECLAMATIILOR-doc
- Boca Grațiela Dana (2012), *Bazele managementului calității în afaceri*, Editura Risoprint, Cluj-Napoca
- Ioan Mircea Pop (2022), Managementul calității și siguranței alimentelor, Editura Tipo Moldova, Iași
- Boca Grațiela Dana (2009), *Îmbunătățirea managementului calității*, Editura Universității de Nord, Baia Mare
- Boca Grațiela Dana (2009), *Bazele managementului calității*, Editura Universității de Nord, Baia Mare

#### NEW INDUSTRY 6.0 ON THE HORIZON

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Abstract: The fourth industrial revolution - or Industry 4.0 - is transforming economies, jobs and even the society we live in today. Technologies of all kinds, especially digital technologies, are merging with each other using data analytics, artificial intelligence, cognitive technologies and the Internet of things (IoT) to create digital enterprises that are not only interconnected, but perfectly capable of making informed decisions. In short, this revolution incorporates intelligent technologies, connected to each other, transcending the framework of organizations and interfering with our daily lives. In this context, the industry's needs for durability, robustness, safety and resistance have been accentuated. A new industrial revolution is taking shape, Industry 6.0, based on antifragility and increased productivity. These can be achieved through the intensive use of artificial intelligence, machine learning, advanced robotics, a highly specialized workforce and, of course, the flexibility of delivery channels and their proximity to the consumer. New technologies and human resources play a key role on the way to Industry 6.0 in an innovative and creative business environment.

**Keywords:** *Industry 6.0, Industry 4.0, management change, transformation* 

#### References

Brozzi, R.; D'Amico, R.D.; Pasetti Monizza, G.; Marcher, C.; Riedl, M.; Matt, D. Design of Self-Assessment Tools to Measure Industry 4.0 Readiness. A Methodological Approach for Craftsmanship SMEs. *IFIP Adv. Inf. Commun. Technol.* 2018, *540*, 566–578. [Google Scholar]

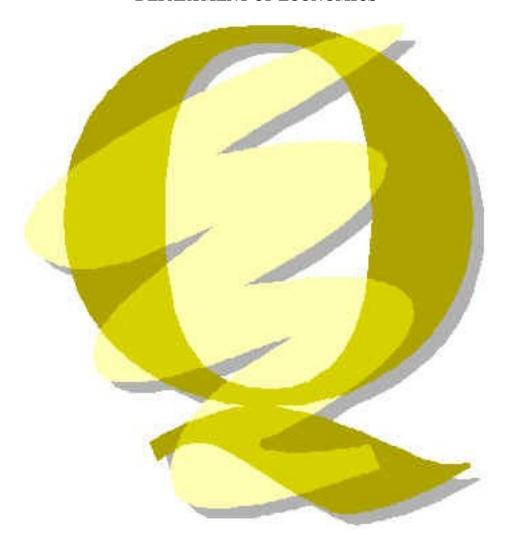
Caiado, R.G.G.; Scavarda, L.F.; Gavião, L.O.; Ivson, P.; de Mattos Nascimento, D.L.; Garza-Reyes, J.A. A Fuzzy Rule-Based Industry 4.0 Maturity Model for Operations and Supply Chain Management. *Int. J. Prod. Econ.* 2021, *231*, 107883. [Google Scholar] [CrossRef]

- Kruger, S.; Steyn, A.A. A Conceptual Model of Entrepreneurial Competencies Needed to Utilise Technologies of Industry 4.o. *Int. J. Entrep. Innov.* 2020, 22, 56–67. [Google Scholar] [CrossRef]
- Popkova, E.G.; Egorova, E.N.; Popova, E.; Pozdnyakova, U.A. The Model of State Management of Economy on the Basis of the Internet of Things. *Stud. Comput. Intell.* 2019, *826*, 1137–1144. [Google Scholar]
- Ratnasingam, J.; Latib, H.A.; Yi, L.Y.; Liat, L.C.; Khoo, A. Extent of Automation and the Readiness for Industry 4.0 among Malaysian Furniture Manufacturers. *BioResources* 2019, *14*, 7095–7110. [Google Scholar] [CrossRef]
- Santos, K.; Rocha Loures, E.F.; Junior, O.; Santos, E. Product Lifecycle Management Maturity Models in Industry 4.0. IFIP Advances in Information and Communication Technology. Available online: https://hal.inria.fr/hal-02075595 (accessed on 5May 2023).
- Sriram, R.M.; Vinodh, S. Analysis of Readiness Factors for Industry 4.0 Implementation in SMEs Using COPRAS. *Int. J. Qual. Reliab. Manag.* 2021, *38*, 1178–1192. [Google Scholar] [CrossRef]
- Sternad, M.; Lerher, T.; Gajšek, B. Maturity Levels For Logistics 4.0 Based On New's Industry 4.0 Maturity Model. Available online: https://ideas.repec.org/a/osi/bulimm/v18y2018p695-708.html (accessed on 5 May 2023).
- Trstenjak, M.; Opetuk, T.; Cajner, H.; Tosanovic, N. Process Planning in Industry 4.0—Current State, Potential and Management of Transformation. *Sustainability* 2020, *12*, 5878. [Google Scholar] [CrossRef]
- Wagire, A.A.; Joshi, R.; Rathore, A.P.S.; Jain, R. Development of Maturity Model for Assessing the Implementation of Industry 4.0. Learning from Theory and Practice. *Prod. Plan. Control.* 2020, *32*, 603–622. [Google Scholar] [CrossRef]

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