

ROLE OF IOT IN INCREASING PROFITABILITY OF ENTERPRISES

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Abstract

The whole study is based on the impact of internet of things on the digital market. Therefore, it is highlighted that the financial condition of the company is based on the satisfaction of the customers. Moreover, the research background of this study takes place in this research topic. Additionally, research questions and research objectives are addressed in this chapter. Moreover, researchers also introduce literature review and thematic analyses are take place within this portion. Researcher has used the Walker's Theory of Profit in this chapter. On the other hand, future research scope is the important factors that are highlighted in this portion.

Keywords: IoT, Service quality of IoT, SERVQUAL methods, Digital platform, Customer satisfaction

Introduction

The Internet of things is referred to the physical objectives based on the network embodied with the sensors. IoT is considered a system that is related to digital and mechanical machines. This research chapter is based on the research objectives and research background. Therefore, a literature review plays an important role in this chapter. Moreover, research theory and quality review of the research is the other part that plays an important role in this chapter. Connecting and exchanging data is the main path that helps to connect with other devices. It is considered a digital platform that enables communication with others. Additionally, the internet of things is capable to transform the digital world.

Background

The Internet of Things is an important technology that is capable to change the digital world. The public sector's economic value becomes changed based on IoT technology. Therefore, it is the important part that perfectly suits environmental sustainability. Additionally, online information and communication process are highlighted with the help of this internet of things. With the help of IoT, power consumption is highlighted and it also helps to increase the growth of the company. On the base of the IoT, data is connected with the monitors, and therefore, energy resources are highlighted. With the help of this internet of things reducing excess watering is an important key factor. Moreover, the business growth of the company is highlighted with the help of this IoT technology.

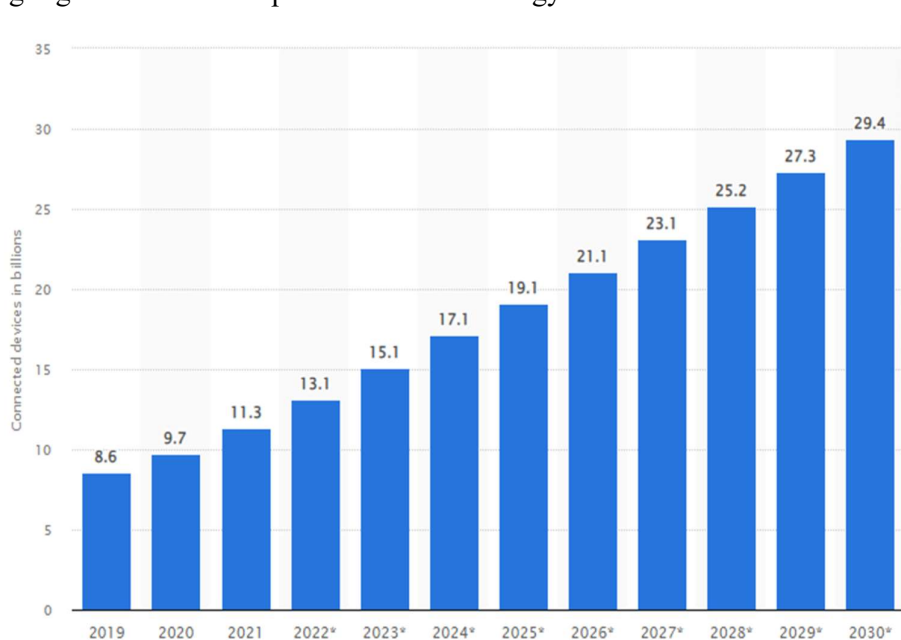


Figure 1: Factors on which IoT technology depends

(Source: Statista, 2022)

Figure 1, highlights that customer satisfaction is an important factor that helps to increase the growth of the company (Statista, 2022). On the basis of the positive response of the customers, the acceptance of IoT technology is highlighted. Creating energy-efficient data sources is the key factor of this technology. Power consumption also increased with the help of this IoT technology. Smart agriculture is the important part that is highlighted by reducing waste water and this is the important part of this IoT technology.

Enterprise IoT market 2019–2027

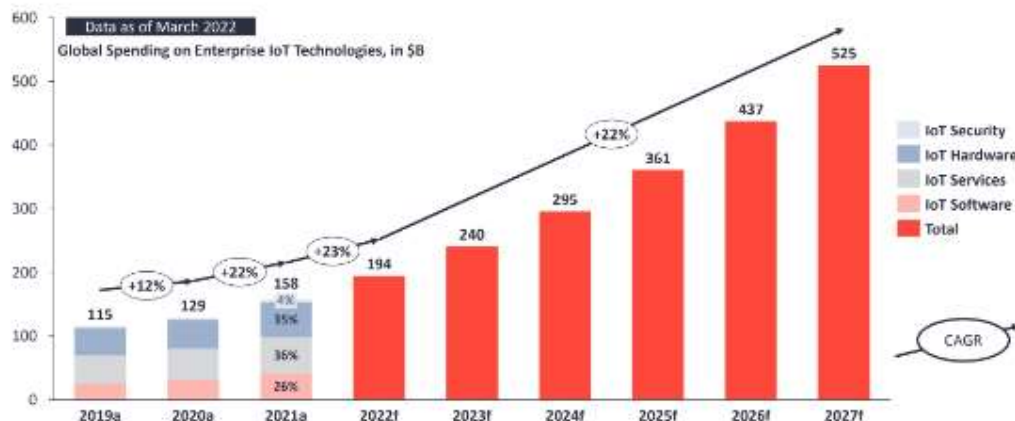


Figure 2: Impact of the internet of things on digital platform as per different years

(Source: Khanboubi, Boulmakoul & Tabaa, 2019)

From figure 2, it is mentioned that the internet of things is an important part of everyone's life and it helps to connect with objectives as per the usage of different software in different years (Khanboubi, Boulmakoul & Tabaa, 2019). It is considered an important source of communication; moreover, different applications of this IOT technology are highlighted in this chapter. The rising of consumer confidence is an important factor that plays an essential role in business marketing. Additionally, service quality is an important part that helps to increase the growth of the company.

Research Objectives

The research objectives of this article are mentioned below:

- To analyze the role of IoT in business functions
- To understand the importance of engaging IoT to increase business profitability
- To identify different ways of satisfying customers with the help of IoT to increase profitability.

Research questions

The research questions of this article are mentioned below:

RQ1: What is the important role of IoT in business functions?

RQ2: Why is it necessary to understand the importance of engaging IoT to increase business profitability?

RQ3: What are different ways of satisfying customers with the help of IoT to increase profitability?

LITERATURE REVIEW

Introduction

In this section, the impact of the innovative new technology is highlighted and moreover, service quality is another important factor that is highlighted in this portion. Service quality is the main key path that helps to influence the growth of the company. Therefore, different factors help to increase the profitability of the enterprise. Therefore, a number of production units help to increase the profitability of the enterprise. Moreover, value per unit is another factor that helps to increase the growth of the company. On the basis of this growth customer satisfaction is highlighted with the help of the innovative software that are used in IoT.

Service quality in the IoT

The service quality of the internet of things is based on three main things which are the QoS of the service application layer, the QoS of sensing layers, and lastly, the QoS of the network layer. This internet of things considered as pen dominant concept. Moreover, service quality is based on the physical objectives and digital transformation is based on the service quality of the internet of things. Improvement of data quality is the main factor that helps to increase the acceptance of the IoT. As per the thoughts of Chowdhury *et al.* (2019), downstream understanding is the main key factor of this IoT. Quality mishap is the main part of this technology and the collective network of the connected device is considered two important factors highlighted in this chapter. Communication between two devices is addressed in this chapter, moreover, it helps to increase the growth of the business.

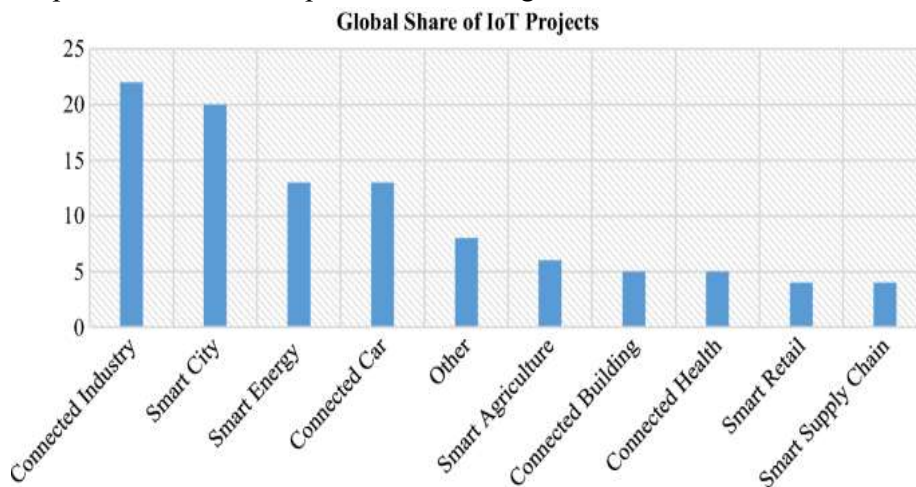


Figure 3: Service quality of IoT

(Source: Chowdhury *et al.* 2019)

Figure 3 helps to understand the impact of service quality on IoT. Therefore, it is addressed that connected industry, smart city, and smart energy is the most important factor that affects the service quality of the internet of things. Changes on the basis of the preference of the

customers help to increase the growth of the company. IoT is an important technology that motivates customers to communicate digitally.

Service quality is based on the usage of effective software methods which help to understand the multidimensional pathway of the research technology. Therefore, customer expectations and needs are the main key parts of this method. Expectancy-disconfirmation paradigm is the most important key factor of this research process and it helps to increase the acceptance of the new technology (Desai & Mahalakshmi, 2018). Additionally, the service quality of any product helps to improve the product quality, hence it is allowed to acceptance by the customers.

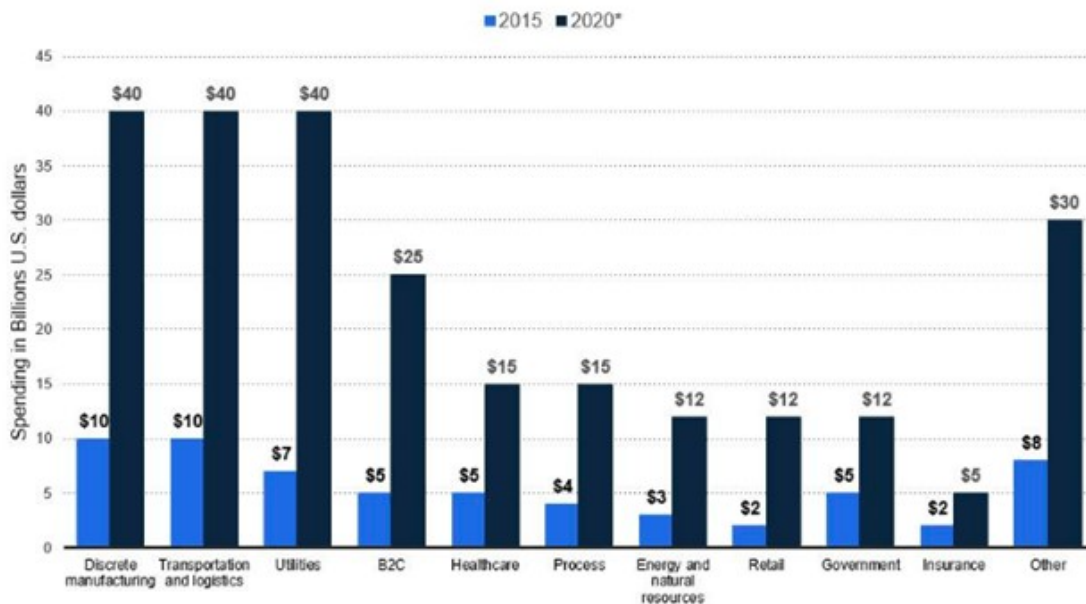


Figure 4: Usage of IoT in different sectors based on service quality of IoT

(Source: Desai & Mahalakshmi, 2018)

Figure 4 helps to analyze the service quality of the IoT which is measured by the SERVQUAL methods and it shows the amount of expenditure in dollars for using IoT in different sectors. Therefore, it is addressed that service quality is an important factor that is mainly based on customer satisfaction. Additionally, the service gap model is also highlighted in this portion as per the differences in service quality of IoT in the different sectors.

Customer satisfaction using IoT

Customer satisfaction is an important factor that helps to increase the growth of the company. Based on customer satisfaction, researchers are capable to understand the role of the customer in business growth. According to customer satisfaction, customer retention is easily addressed. The higher lifetime value of the innovative product is highlighted with the help of customer satisfaction. Reducing customer chum helps to analyze the researcher's basic change of the product. Therefore, the productivity of the company is also highlighted (Rahimi & Kozak,

2018). Boosting the loyalty of the customers is highlighted on the basis of customer satisfaction. With the help of the loyal customer, the growth of the business is highlighted.

SURVEY SAYS: CUSTOMERS HIGHLY VALUE GREAT CUSTOMER EXPERIENCES

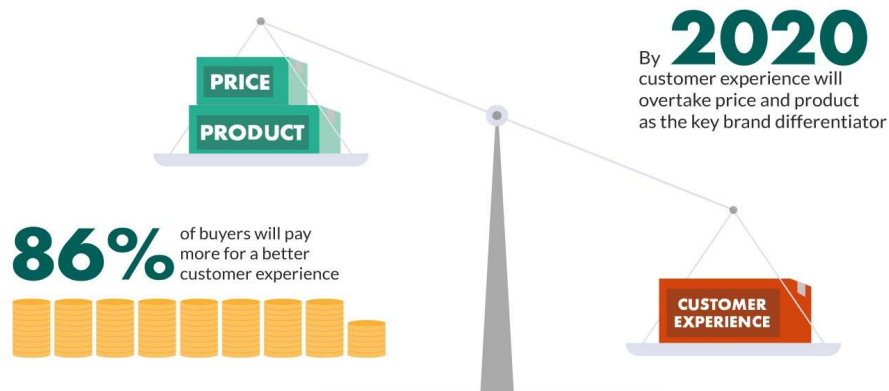


Figure 5: Customer satisfaction on the base of the customer experience
(Source: Rahimi & Kozak, 2018)

Figure 5, helps to understand the impact of customer satisfaction. Moreover, customer satisfaction helps to build the structure of the company. According to customer satisfaction, the loyalty of the customer is highlighted. Additionally, brand satisfaction is also highlighted on the basis of customer satisfaction.

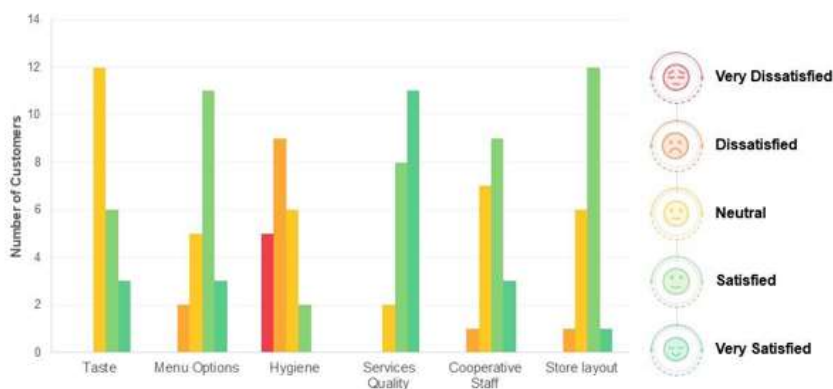


Figure 6: Customer satisfaction on the base of the customer experience
(Source: Rahimi & Kozak, 2018)

With the help of figure 6, researchers are capable to understand the impact of the customers on the service quality of the internet of things. Customers are an important part of the company. Therefore, the role of the customers is highlighted on the base of their satisfaction of the customers. Customers are capable of increasing the trust of the employees of the company (Desai & Mahalakshmi, 2018). Moreover, employees are capable to understand the major drawback of their productivity. Another important part that is addressed during this research is the feedback of the customers on the social platform.

Theory

Walker's Theory of Profit

This theory is based on the financial condition of the company and according to this theory, the normal rates of profit are highlighted with the help of the financial condition of the company. Therefore, it is highlighted that customers are the important key factor of the company and on the basis of customer satisfaction the growth of the company is highlighted. Additional growth of the company brings financial growth to the company. Concept of the profit moreover, pure profit is the main two structure that helps to increase business growth (Ahmadinejad, 2019). The rate of ability is the important key path that helps to increase the productivity of the company. Organizer coordinators play an important role in the profit of the company. Therefore, it helps to increase the productivity of the company.

METHODOLOGY

This study is based on the secondary qualitative method; therefore, all the data of this research is collected from different journals and articles. On the basis of the present research objective, researchers are allowed to collect all data. The present research topic is allowed to be addressed on the basis of the relevant objectives. Systematic review is the important factors of this secondary data collection process (Söderlund, 2018). Therefore, this method considers a cost-effective process and a better understanding of the research topic is highlighted with the help of this secondary data collection method. Concept and ideas based on knowledge is an important part of this research study. Moreover, descriptive exploratory frameworks about the research topic are highlighted with the help of the secondary qualitative data collection process. Relevant journals, websites, and liberties help the researchers to collect data. A brief description of the research topic is easily evaluated on the basis of the thematic analysis. Implement the themes and article the research topic is highlighted.

RESULT

Quality review

Authors	Study design	Number of resources	Measured outcomes	Result	Quality review
Imhanzenobe (2019)	Qualitative	15	Impact of proper training on service quality of IoT	The Internet of things helps to describe the physical objectives that have an impact on digital communications	Moderate
Mann <i>et al.</i> (2021)	Qualitative	35	The influence of service quality on the basis of customer satisfaction is highlighted	It helps to understand the impact of customer satisfaction helps to increase the productivity of the company and it also helps to increase the financial condition of the company.	High
Zhan & Walker (2019)	Qualitative	25	The financial condition of the company is the main factor that helps to bring a profit to the company	According to this source, it is highlighted that the growth of the company is totally based on the financial condition moreover, the financial condition of the company helps to bring job	Moderate

				satisfaction to the employees	
Zahriana (2020)	Qualitative	45	Influencer of the IoT technology is based on the attachment of the customers and innovating new ideas helps to increase customer satisfaction	A collective network is an important factor that facilitated communication between devices	Moderate

Table 1: Quality review

(Source: By learner)

Thematic coding

Author	Code	Themes
Imhanzenobe (2019) Mann <i>et al.</i> (2021)	SERVQUAL dimensions, Customer satisfaction, Training methods, Customer loyalty	IoT has an important role to increase the profitability of organizations
Zhan & Walker (2019) Zahriana (2020)	Efficiency, Organizational process innovation, Protection of devices, Privacy	There is a significant role of IoT in making the organizational process innovative

Table 2: Thematic coding

(Source: By learner)

Thematic analysis

Theme 1: *IoT has an important role to increase the profitability of organizations*

Organizational profit is based on the internet of things; moreover, it is an important factor in business (Mann *et al.* 2021). The efficiency of the employees and increasing profitability are based on organizational growth. The financial condition of the company is based on customer satisfaction and therefore, it helps to increase the attraction of the employees towards the company (Imhanzenobe, 2019). Another important part that is addressed during this research is the feedback of the customers on the social platform. Customers are more attached to social media and on the basis of the customer's feedback, researchers are allowed to eliminate their drawbacks and which helps to increase the productivity of the company.

Theme 2: *There is a significant role of IoT in making the organizational process innovative*

New business opportunities are highlighted with the help of organizational innovation. With the help of this internet of things reducing excess watering is an important key factor (Zhan & Walker, 2019). Moreover, the business growth of the company is highlighted with the help of this IoT technology. Communication between two devices is addressed in this chapter; moreover, it helps to increase the growth of the business. As per the ideas of Zahriana (2020), customers are more attached to social media and on the basis of the customer's feedback, researchers are allowed to eliminate their drawbacks and which helps to increase the productivity of the company.

Discussion

With the help of this research article, it is understood that organizational innovation is easily identified by the customer's attachment to the company. Moreover, IoT technology is capable to increase their income rate on the basis of this theory. On the other hand, this theory helps researchers to innovate new technology. It is considered a digital platform that enables communication with others. Additionally, the internet of things is capable to transform the digital world (Ahmadinejad, 2019). Data is connected with the monitors and therefore, energy resources are highlighted. A review of the quality of the data is more relevant and easily understood by the researchers.

CONCLUSION

Boosting the loyalty of the customers is highlighted on the basis of customer satisfaction. With the help of loyal customers, the growth of the business is highlighted. Additionally, the service quality of any product helps to improve the product quality, hence it is allowed to acceptance by the customers. Reducing customer chum helps to analyze the researcher's basic change of the product. Therefore, the productivity of the company is also highlighted. Additionally, with the help of this research study, researchers are capable to collect relevant data on the basis of customer satisfaction and service quality of the internet of things.

Limitations

Researchers have used secondary data collection methods and this is the major limitation of this article. Therefore, there is hardly any statistical data that are collected in this study. Therefore, limited resource is the major drawback of this study. Effective data collection methods are disrupted by this data collection process.

FUTURE SCOPE

Researchers are capable to understand the importance of the customer retention in IoT technology. Therefore, researchers are capable to collect information about the new technology. Better decision-making capacity of the customers is highlighted in this research study.

REFERENCES

- Ahmadinejad, B. (2019). The impact of customer satisfaction on word of mouth marketing (Case study: Bamilo online store). *SCIREA Journal of Management*, 3(2), 40-52. Retrieved from: https://www.researchgate.net/profile/Bahareh-Ahmadinejad/publication/333478283_The_Impact_of_Customer_Satisfaction_on_Word_of_Mouth_Marketing_Case_Study_Bamilo_Online_Store/links/5cef4bea92851c4dd01a6f44/The-Impact-of-Customer-Satisfaction-on-Word-of-Mouth-Marketing-Case-Study-Bamilo-Online-Store.pdf [Accessed on: 07/11/2022]
- Chowdhury, M. Z., Shahjalal, M., Hasan, M. K., & Jang, Y. M. (2019). The role of optical wireless communication technologies in 5G/6G and IoT solutions: Prospects, directions, and challenges. *Applied Sciences*, 9(20), 4367. Retrieved from: <https://www.mdpi.com/2076-3417/9/20/4367/pdf> [Accessed on: 07/11/2022]
- Desai, K., & Mahalakshmi, S. (2018). Impressions of service quality dimensions on customer's intention to use IoT at Bangalore Electricity Supply Company (BESCOM). *J. Adv. Manag. Res*, 6, 74-82. Retrieved from: <https://www.academia.edu/download/56075456/8JAMJan-7052P.pdf> [Accessed on: 07/11/2022]
- Imhanzenobe, J. O. (2019). Operational efficiency and financial sustainability of listed manufacturing companies in Nigeria. *Journal of Accounting and Taxation*, 11(1), 17-31. Retrieved from: <https://jasonwmoore.com/wp-content/uploads/2019/02/WalAccessedRetrieved> on: 07/11/2022]
- Kaura, R., Kishor, N., & Rajput, N. (2022). Causal relation and dynamic volatility spillover between commodity market and stock market: empirical evidence from India. *Afro-Asian Journal of Finance and Accounting*, 12(2), 232-253
- Khanboubi, F., Boulmakoul, A., & Tabaa, M. (2019). Impact of digital trends using IoT on banking processes. *Procedia Computer Science*, 151, 77-84. Retrieved from: <https://www.sciencedirect.com/science/article/pii/S1877050919304752/pdf?md>

- 5=d699e30d30b5d2fd07fdff1374e9de1d&pid=1-s2.0-S1877050919304752-main.pdf
[Accessed on: 07/11/2022]
- Kumar B. (2022). The continuous investment in artificial intelligence and its impact on ensuring customer satisfaction. *Korea review of international studies*, Volume 15, Special Issue 03
- Kumar B. et al. (2022). The Role of IOT and Cyber Warfare in Developing the Health Care Devices. *Mathematical Statistician and Engineering Applications*, Page Number: 1185-1194 Publication Issue: Vol. 71 No. 3s (2022)
- Kumar B. (2022). Deposit mobilization & branch expansion dimensions- a critical analysis with special reference to Dashen bank Ethiopia. *GIS Science Journal* ISSN NO : 1869-9391 Volume 9, Issue 3, 2022 Page: 175-197
- Mann, L., Chang, R., Chandrasekaran, S., Coddington, A., Daniel, S., Cook, E., ... & Smith, T. D. (2021). From problem-based learning to practice-based education: A framework for shaping future engineers. *European Journal of Engineering Education*, 46(1), 27-47. Retrieved from: https://www.researchgate.net/profile/Siva-Chandrasekaran-2/publication/338387074_From_problem-based_learning_to_practice-based_education_a_framework_for_shaping_future_engineers/links/5e321139299bf1cdb9fc9022/From-problem-based-learning-to-practice-based-education-a-framework-for-shaping-future-engineers.pdf [Accessed on: 07/11/2022]
- Matinheikki, J., Aaltonen, K., & Walker, D. (2019). Politics, public servants, and profits: Institutional complexity and temporary hybridization in a public infrastructure alliance project. *International Journal of Project Management*, 37(2), 298-317. Retrieved from: https://research.aalto.fi/files/40930729/Matinheikki_Aaltonen_Walker_JPMA.pdf [Accessed on: 07/11/2022]
- Rajput, N., & Goyal, A. K. (2019). Indian Banking Sector a Major Contributor to Economy: Constancy Major Concern. *International Journal of Recent Technology and Engineering*, 3(2), 45-55.
- Rajput, N., Das, G., Shivam, K., Nayak, C. K., Gaurav, K., & Nagpal, P. (2021). An inclusive systematic investigation of human resource management practice in harnessing human capital. *Materials Today: Proceedings*
- Rahimi, R., & Kozak, M. (2018). Impact of customer relationship management on customer satisfaction: The case of a budget hotel chain. *Journal of Travel & Tourism Marketing*, 34(1), 40-51. Retrieved from: <https://avesis.deu.edu.tr/yayin/95243531-42e3-4328-88c9-b7e46de4503c/impact-of-customer-relationship-management-on-customer-satisfaction-the-case-of-a-budget-hotel-chain/document.pdf> [Accessed on: 07/11/2022]
- Söderlund, M. (2018). The proactive employee on the floor of the store and the impact on customer satisfaction. *Journal of Retailing and Consumer Services*, 43, 46-53. Retrieved from: <https://www.academia.edu/download/84363624/06-86-71.pdf> [Accessed on: 07/11/2022]

- Statista, 2021, *Number of Internet of Things (IoT) connected devices worldwide from 2019 to 2021, with forecasts from 2022 to 2030, by metric* Retrieved from: <https://www.statista.com/statistics/1183457/iot-connected-devices-worldwide/> on 7th November, 2022
- Zahriana, A. F. (2020). The Influence Of Service Quality Toward Customers' Loyalty With Customers' Satisfaction As Intervening Variable At PT. Arindo Jaya Mandiri. *Admisi dan Bisnis*, 21(2), 85-92. Retrieved from: <https://jurnal.polines.ac.id/index.php/admisi/article/viewFile/1876/106834> [Accessed on: 07/11/2022]
- Zhan, X. and Walker, S., 2019. Craft as leverage for sustainable design transformation: A theoretical foundation. *The Design Journal*, 22(4), pp.483-503. Retrieved from: <https://www.tandfonline.com/doi/pdf/10.1080/14606925.2019.1613040> [Accessed on: 07/11/2022]