

# The Benefits of Employing Global Virtual Teams in International Business

Saleh Alkoud

Department of Business Administration, Faculty of Economics and Management Sciences,  
International Islamic University Malaysia, Jalan Gombak, 53100 Kuala Lumpur, Malaysia  
Corresponding Author Email: salehalkoud@gmail.com

Liana Qatamin

Department of Business Administration, Faculty of Economics and Management Sciences,  
International Islamic University Malaysia, Jalan Gombak, 53100 Kuala Lumpur, Malaysia  
Email: Lianaqatamin9@gmail.com

To Link this Article: <http://dx.doi.org/10.6007/IJARBS/v13-i6/17169> DOI:10.6007/IJARBS/v13-i6/17169

*Published Date:* 20 June 2023

## Abstract

There is a growing number of multinational companies operating around the world, both in terms of their numbers and the amount of investments abroad. Along with this expansion, there is a noticeable trend among major multinational companies to establish virtual workplaces in order to take advantage of the benefits of global virtual teams. This study aims to increase in-depth knowledge of the benefits of global virtual teams in global business. This paper relies on the qualitative methodology through an in-depth content analysis of the previous literature starting from 2020 to 2023. The study concluded that the global virtual teams contribute to the growth of international business in three main ways, the first of which is reducing costs such as fixed costs such as rent, accommodation, etc., travel and transportation costs, and recruitment costs. The second is to increase productivity by attracting talents from different countries, the possibility of working 24/7, and innovative solutions to complex problems, and the third is the expansion in global markets through the geographical expansion of target markets, and the rapid response to changes in the international business environment. This study contributes to the body of knowledge by providing a thorough grasp of the benefits of employing global virtual teams to promote international trade. These findings are particularly noteworthy because the current study explores the benefits of utilising virtual teams in depth, whereas previous studies mentioned them briefly in the context of other issues.

**Keywords:** Global Virtual Team, GVTs, International Business, IB, Benefits

**Introduction**

It is noticeable that there is a significant growth in international business, and that the increase in the number of multinationals and the multiplicity of their branches is one of the manifestations of this growth. On the other hand, the dependence of multinational companies on global virtual teams is increasing dramatically, especially with the increasing development of information and communication technology due to its great advantages (Ben Sedrine et al., 2020; Mysirlaki & Paraskeva, 2020; Han et al., 2020; Glikson & Erez, 2020; Soon & Salamzadeh, 2020; Müller & Antoni, 2020; Garro-Abarca et al., 2021; González-Anta et al., 2021; Randazzo-Davis & Nelson, 2020; Shaik et al., 2021; Zhang et al., 2022; Lin & Roan, 2021; Mayer et al., 2020). Statistics indicate an increasing growth of remote work in the virtual work method. For instance, according to a 2016 poll by the Society for Human Resources Management, 60% of US businesses allowed their workers to work remotely (Turesky et al., 2020).

Velez-Calle et al (2020) make the argument that the current and rapidly changing global technology environment has an impact on how businesses do international commerce. Virtual work and communications are now commonplace in business, and this trend is projected to increase (Purvanova et al., 2020). Global Virtual Teams (GVTs) are "quickly becoming the rule rather than the exception" in international corporations (Li et al., 2020; Zaharie, 2021). Velez-Calle et al (2020) further indicated that over 60% of managers reportedly often work in virtual teams. Technological advances encourage the expansion of virtual teams through the use of communication tools that make it easier for team members to rely on each other and collaborate (Mysirlaki & Paraskeva, 2020; Rogers et al., 2021). Organizations have used these benefits to improve work by hiring global virtual teams (Randazzo-davis & Nelson, 2020; Efimov et al., 2020). As enterprises have grown internationally, the GVT has established itself as a standard method of doing business (Randazzo-davis & Nelson, 2020). per a 2016 Gallup study, today's workforce communicates online and is managed by leaders who work remotely. In the United States, 34% of the workforce spends the majority of their time working remotely, while 43% of workers do so sometimes (Newman et al., 2020).

The outbreak of the Covid-19 epidemic at the beginning of 2020 increased the demand for international companies to hire global virtual teams. As a result of the Covid-19 crisis in 2020, considerable numbers of businesses all across the world started requesting that their workers work remotely, which sharply increased the number of virtual teams (Mysirlaki & Paraskeva, 2020; Bartsch et al., 2020; Turesky et al., 2020; Zeuge et al., 2020; Zuofa & Ochieng, 2021; Newman & Ford, 2021; Abarca et al., 2020). Al Uwaisi and Devi (2022) argue that the COVID-19 epidemic has driven businesses to adopt a work-from-home culture swiftly.

The research problem lies in the contradiction between the increasing importance of employing global virtual teams in international business, and the lack of studies dealing with the benefits of these teams. Many international companies in different industries and sectors have developed virtual teams in response to the more competitive global market because it may benefit organizations (Lin & Roan, 2021). However, studies on the advantages of virtual teams are still limited and are not addressed individually; rather, they are discussed in the context of other subjects. The research problem focuses on revealing the potential benefits of creating virtual business places and establishing global virtual teams that contribute to the success of an international business for multinational companies and cross-border companies, as previous studies suffer from a gap in a deep analysis of the potential benefits and advantages of global virtual teams.

The main research question is about revealing the most important benefits that international companies reap from employing global virtual teams: This question can be branched into three sub-questions

- How do global virtual teams (GVTs) contribute to reducing costs in international cross-border companies?
- How do global virtual teams (GVTs) contribute to increasing productivity in international cross-border companies?
- How do global virtual teams (GVTs) contribute to increasing global market share in international cross-border companies?

The current study follows the qualitative research methodology by analyzing the content of previous studies related to the subject of the study, which were conducted during the last years of 2020 and beyond, as the importance of virtual teams and their application in international companies increased after the spread of Covid-19.

The current study contributes to expanding a deeper and more comprehensive understanding of the advantages and benefits of global virtual teams, which have become a reality and dependence on them increases greatly, especially after the Covid-19 crisis at the beginning of 2020. In particular, the current study contributes to raising the efficiency of resource use for multinational companies by raising productivity on the one hand, reducing costs on the other hand, and expanding target markets on the third hand, by highlighting the benefits of virtual work and its role in promoting the efficient use of resources and benefiting from the information and communication revolution.

This research paper contributes to the academic field and has important knowledge benefits for researchers and workers in the field of international business. It provides a comprehensive and in-depth view of the benefits of employing global virtual teams in international business. By providing a comprehensive view of the multiple benefits of global virtual teams, researchers can use this paper as a basis for further studies and research in this area. They can develop theoretical models and strategies for improving the performance of global virtual teams, and better understand the factors that influence their success. They can also use the findings in the paper to guide recruitment and training policies in global companies, and to promote innovation and creativity in international business. Overall, this paper is a valuable source of knowledge and information for those working in the academic field and those interested in international business. It enhances our understanding of recent transformations in the world of business and information technology and their impact on global companies. It also enhances our ability to adapt and innovate in light of the rapid transformations in the global labor market, and provides a frame of reference for the effective implementation of global virtual teams in the future.

### **Literature Review**

There are different definitions of global virtual teams, but in general, they all refer to several characteristics of virtual teams, including the geographic distribution of the team to perform specific tasks using information and communication technology (ICT). As cited by Randazzo-davis & Nelson (2020); Daim et al (2012); Pinjani & Palvia (2013) have defined global virtual teams as “ GVTs are culturally diverse groups or teams that work together to achieve goal commonality by using computer-mediated technologies (p45). Moreover, virtual teams are defined as “small temporary groups of geographically, organizationally, and/or time-dispersed knowledge workers who coordinate their work predominantly with electronic

information and communications technologies to accomplish one or more organizational tasks” (Davidaviciene et al., 2020).

In the current study, the content of the previous studies will be analyzed in two phases of the analysis. The first includes dividing the benefits of employing global virtual teams GVTs into three main benefits that represent the main directions for the efficient use of resources, which are reducing costs, raising productivity, and increasing market share. The second phase includes an in-depth analysis of each of these directions to identify and explore the role of global virtual teams in each of them.

- **Cost Reduction**

Multinational businesses and organisations can save costs in a variety of ways by embracing virtual work across borders. Sagar et al (2022) point out that the benefits of VPTs in terms of cost savings are clear and cannot be overlooked. Lin and Roan (2021) have confirmed that a successful virtual workforce assists businesses cut expenses while boosting output. Moreover, global virtual teams can avoid costly face-to-face contacts thanks to the growth of multinational virtual teams (MNVT) (Cheng et al., 2021; Zaharie, 2021). Depending on the company's aims and objectives, cost reduction may take the following forms

- 1. Reduction of Overhead Costs**

With virtual teams, companies can reduce the need for traditional office space and associated overhead costs such as rent, utilities, and office supplies. Virtual teams can work from home or remotely, thus reducing the need for expensive office space and lowering overhead costs. Capolupo et al (2022) stated that global virtual teams (GVTs) open the door to a number of benefits. Among them, it makes it possible to avoid the customary material expenditures of face-to-face interactions. Additionally, employers may also profit from remote labor since it lowers overhead expenses like office rent (Schuster, 2022; Rogers et al., 2021). By lowering travel and meeting costs, virtual teams provide further financial gain (Fekry Youssef et al., 2022).

- 2. Minimization of Travel Expenses**

Virtual teams reduce the need for costly travel by enabling team members to cooperate and communicate from anywhere in the globe. This can assist businesses in lowering their trip costs, including flight, hotel, and meals, which will result in considerable cost savings. Velez-Calle et al (2020) indicated that, with the use of communication technology, global virtual teams (GVTs) may also provide a number of noteworthy advantages, including more effective use of resources by saving both time and money on labour and other costs associated with travel, such as lodging and flight. A GVT can be advantageous since a virtual team uses less resources and incurs fewer expenditures for time, travel, and relocation (Randazzo-davis & Nelson, 2020; Randazzo-Davis & Nelson, 2020; Morrison-Smith & Ruiz, 2020).

Technology advancements enable remote working and virtual team communication, and future transportation cost savings will undoubtedly improve this technology (Abarca et al., 2020). Numerous opportunities have arisen as a result of the expansion of virtual teams for both companies and individuals. Since workers can conduct their jobs from home, businesses have benefited greatly, which includes decreased travel time (Mysirlaki & Paraskeva, 2020). Team members may collaborate on numerous projects and coordinate duties without being physically present, which leads in lower costs because travel expenses (such flights, accommodations, etc.) are not necessary (Davidaviciene et al., 2020). Utilising virtual teams

improves the economy by saving money on travel, lodging, and per diem costs (Fekry Youssef et al., 2022; Mysirlaki & Paraskeva, 2020; Zuofa & Ochieng, 2021; Eseryel et al., 2020).

### **3. *Reduced Employee Turnover***

Virtual teams often offer more flexible work arrangements, which can help reduce employee turnover rates. This can help companies save money on recruitment and training costs, as well as improve employee morale and satisfaction. The growth of virtual teams has created multiple opportunities for workers. The employees profited considerably as the work-life balance improved since they could work from home (Mysirlaki & Paraskeva, 2020; Rogers et al., 2021; Mysirlaki & Paraskeva, 2020). This increases the percentage of employees who intend to stay and lowers the turnover rate, allowing for cutting expenses and employment. Moreover, flexibility in work patterns is another factor that contributes to the stability and intention of human resources remaining in companies operating with virtual teams, which reduces recruitment costs (Davidaviciene et al., 2020). Furthermore, due to flexible working hours, remote work also enables employees to maintain a good work-life balance (Schuster, 2022).

On the employee's side, Elyousfi et al (2021) list a number of possible advantages for virtual teams, such as promoting work-life balance, cutting down on travel time, lowering workplace stress, lowering the need for sick days, and raising employee happiness, which improves recruiting and retention strategies. Moreover, virtual work enhances employee job satisfaction because it provides workers with more freedom (Schuster, 2022; Youssef et al., 2022). In addition, according to Al Uwaisi & Devi (2022), virtual employment has a good effect on people on both a personal and professional level, where people may work from home during business hours with less commuting and greater control over their schedule. Additionally, it increases the employee's liberty and is thought to lessen office-related distractions when working from home. The virtual workplace is more comfortable and flexible while working from home, and employees benefit from not having to worry about household chores. The following table-1 shows the possible types of cost reduction

Table 1

The Contribution of GVTs to Reducing Costs

Cost Reduction Method	Frequency	Weight	Sources
Reduction of Overhead Costs	4	19%	(Capolupo et al., 2022) (Schuster, 2022) (Rogers et al., 2021) (Fekry Youssef et al., 2022)
Minimization of Travel Expenses	11	52.4%	(Calle et al., 2020) (Randazzo-davis & Nelson, 2020 ) (Morrison-Smith & Ruiz, 2020) (Abarca et al., 2020) (Mysirlaki & Paraskeva, 2020) (Davidaviciene et al., 2020) (Fekry Youssef et al., 2022) (Mysirlaki & Paraskeva, 2020) (Zuofa & Ochieng, 2021) (Eseryel et al., 2020) (Paraskeva, 2020)
Reduced Employee Turnover	6	28.6%	(Mysirlaki & Paraskeva, 2020) (Davidaviciene et al., 2020) (Schuster, 2022) (Elyousfi et al., 2021) (Al Uwaisi & Devi., 2022) (Rogers et al., 2021)
3	21	100	21

Source: Developed by researchers

- **Increased Productivity**

Because they have access to the newest technology and can communicate in real time, virtual teams can frequently be more productive than traditional teams. By performing tasks more quickly and with fewer mistakes, this enhanced productivity may help businesses save money. According to Arif, et al (2022) Numerous businesses have established virtual offices and benefited from them, increasing productivity. In addition, Schuster (2022) and Mysirlaki & Paraskeva (2020) assert that working remotely boosts productivity. In the following paragraphs, we explain how the virtual teams that work in international companies can increase the productivity of these companies.

1. **Access to a Wider Pool of Talent**

With the adoption of the virtual work method, businesses may access a larger talent pool from other nations and regions, enabling them to locate the most qualified people. The price of hiring, training, and recruiting may be decreased as a result. Velez-Calle et al (2020) stated in their study that global virtual teams benefit greatly from the use of information and communication technology, and one of these benefits is the ability to assemble teams with the greatest talent available worldwide. Moreover, companies could experience a rise in efficiency and effectiveness thanks to the chance to engage the finest employees in GVTs, regardless of where they are physically located (Capolupo et al., 2022). Other Researchers

confirmed that, one of the benefits of global virtual teams is their ability to access larger pools of talent (Randazzo-davis & Nelson, 2020; Lin & Roan, 2021).

Because GVTs provide a number of advantageous outcomes, many international corporations employ them. For instance, GVTs can bring together the best pool of talent to work on a project despite their different geographic locations (Presbitero, 2020; Lin & Roan, 2021; Davidaviciene et al., 2020; Morrison-Smith & Ruiz, 2020; Zuofa & Ochieng, 2021; Eseryel et al., 2020).

### **2. 24-Hour Duty Cycle**

Global Virtual teams (GVTs) usually employ people from different parts of the world, so you can take advantage of the lag to achieve 24-hour productivity. GVTs have established itself as a standard method of conducting business as cross-border trade has grown by utilising the 24-hour duty cycle (Randazzo-davis & Nelson, 2020; Ben Sedrine et al., 2020). One of the most important advantages of virtual teams is the ability to work 24 hours a day without stopping by having members work in different time zones (Velez-Calle et al., 2020). Davidaviciene et al (2020) further point out that productivity in virtual teams increases as a result of being able to work 24/7 .

### **3. Effective Problem Solving**

Global virtual teams GVTs can collaborate across geographic boundaries, exchanging ideas and experiences between team members spread across different geographies, allowing for effective problem-solving. According to Presbitero (2020), cultural diversity in GVTs can considerably aid in problem-solving by bringing new viewpoints to the table that might not be easily available in teams with a homogeneous cultural background. When problems or challenges develop, GVTs can also use rapid and prompt communication. Researchers have noticed that cultural variety in virtual teams can offer unique viewpoints for problem-solving that may be difficult to obtain in teams with homogeneous cultures (Lin & Roan, 2021; Zuofa & Ochieng, 2021).

Davidaviciene et al (2020) emphasises that it is feasible to obtain an international perspective on business difficulties and solutions while working in global virtual teams. These in turn lead to increased efficiency and improved productivity. The capacity of virtual teams to assemble the necessary skills to solve complicated challenges in spite of geographic dispersion is frequently touted as a major advantage (Rober, 2020). The following table-2 shows methods of increasing productivity

Table 2  
The Contribution of GVTs to Increase Productivity

Increased Productivity Method	Frequency	Weight	Sources
Access to a Wider Pool of Talent	9	50%	(Velez-Calle et al., 2020) (Capolupo et al., 2022) (Randazzo-davis & Nelson, 2020) (Lin & Roan, 2021) (Davidaviciene et al., 2020) (Morrison-Smith & Ruiz, 2020) (Eseryel et al., 2020) (Zuofa & Ochieng, 2021) (Presbitero, 2020 )
24-Hour Duty Cycle	4	22%	✓ (Randazzo-davis & Nelson, 2020) ✓ (Ben Sedrine et al., 2020) ✓ (Velez-Calle et al., 2020) ✓ (Davidaviciene et al., 2020)
Effective Problem Solving	5	28%	✓ (Presbitero, 2020) ✓ (Lin & Roan, 2021) ✓ (Zuofa & Ochieng, 2021) ✓ (Davidaviciene et al., 2020) ✓ (Rober, 2020)
3	18	100%	18

Source: Developed by researchers

- **Global Market Expansion**

Global virtual teams are an important tool for expanding the share of international companies in the global market, through various methods, including expanding the geographical scope of the target market, as well as responding quickly to the rapid changes in the business environment. The following explains these methods.

1. **Expanding the Geographical Scope of The Target Market**

Market expansion can be achieved by employing virtual teams as it helps companies expand their geographical scope and reach new markets. With these teams, companies can reach customers and suppliers around the world, interact with them online and communicate with them via smart devices. Many businesses have started converting to virtual labour to take advantage of access to international markets (Arif, et al., 2022).

2. **Rapid Response to the Changing Business Environment**

Global virtual teams can expand their target markets through their ability to respond quickly to rapid changes in the international business environment. Virtual team members can effectively exchange information and communicate across geographical boundaries, analyze new challenges and opportunities in the global market and adapt to them quickly and effectively. Thus, global virtual teams enhance the diversity of target markets and increase growth and expansion opportunities for international companies in the rapidly changing business environment. Industries use virtual teams in the real world to adapt to the global market and quickly respond to the changing business environment (Lin & Roan, 2021). A

company that uses global virtual teams can respond swiftly to dynamic changes brought on by customers and businesses (Davidaviciene et al., 2020; Zuofa & Ochieng, 2021; Eseryel et al., 2020). The following table-3 shows the methods to increasing the international market share.

Table 3

*The Contribution of the GVTs in Expanding the Target Markets*

Global Market Expansion Method	Frequency	Weight	Sources
Expanding the Geographical Scope of the Target Market	1	20%	✓ (Sagar, Arif, et al., 2022).
Rapid Response to the Changing Business Environment	4	80%	✓ (Lin & Roan, 2021) ✓ (Davidaviciene et al., 2020) ✓ (Zuofa & Ochieng, 2021) ✓ (Eseryel et al., 2020)
2	5	100%	5

Source: Developed by researchers

#### • Findings Discussion

There is increasing international business growth around the world as a major result of the great advances in information and communication technology (ICT). Multinational corporations are one of the most important aspects of cross-border international business. Multinational corporations (MNCs) have employed global virtual teams (GVTs) significantly since the start of the fourth technology revolution 4.0. Covid-19 constituted a turning point in the level of employment of global virtual teams in multinational companies, as virtual work became the rule, not the exception.

Global virtual teams have brought numerous benefits to global companies and have increased the resource utilization efficiency of these companies in three ways. First, by reducing costs, especially fixed costs, particularly, those related to renting traditional workplaces, reducing the cost of travel and transportation, and reducing recruitment costs. Secondly, the global virtual teams contributed to increasing the productivity of companies, by bringing in qualified and trained workers, and opening the possibility of working for 3 periods of time during the day instead of one period, as well as by promoting innovation and creativity for complex problems.

Finally, the global virtual teams promoted opportunities to increase the market share of international companies by expanding the geographical area of the target market, and through flexibility in keeping pace with the global demand for goods and services. Table 4 shows how previous studies have addressed the benefits of hiring virtual teams in international business.

Table 4  
General Summary of the Benefits of Virtual Teams

Type of benefits of GVTs	Name of benefits of GVTs	Frequency of Studies	Weight of Studies
Cost Reduction	Reduction of Overhead Costs	21	48%
	Minimization of Travel Expenses		
	Reduced Employee Turnover		
Increased Productivity	Access to a Wider Pool of Talent	18	41%
	24-Hour Duty Cycle		
	Effective Problem Solving		
Global Market Expansion	Expanding the Geographical Scope of the Target Market	5	11%
	Rapid Response to the Changing Business Environment		
3	8	44	100%

Source: Developed by researchers

### Theoretical Implications

The research enhances provides credible sources and scientific updates on the benefits of global virtual teams (GVTs). The research provides an opportunity to expand knowledge and understanding in this field. The research contributes to providing new studies and research on the benefits of global virtual teams, helping academics to identify future research areas in this field .In particular, the current research can provide academics and researchers to expand the scope of their research in three main directions, the first of which is to search in depth for the contribution of virtual work to reducing corporate costs, and to consider in detail what the nature, type and size of costs are. The second direction, the current study opens up horizons for researchers to consider the role of virtual work in increasing productivity that would contribute to the success of international organizations and companies. There is also a third direction for researchers in this context, which is the contribution of virtual work in expanding the market share of multinational companies.

### Managerial Implications

This study helps expand understanding of the benefits of global virtual teams, which assist managers make appropriate decisions about forming and managing global virtual teams and understanding their benefits, as well as helping managers design effective strategies to take advantage of these teams. In particular, this study supports managers to direct their investments efficiently, by adopting strategies to reduce the costs that companies reap from eliminating costs related to traditional work and adopting virtual work, such as the costs of renting workplaces, accommodation for employees, travel and transportation, and recruitment costs that are greatly reduced. On the other hand, it helps raise the productivity of companies by employing highly qualified talents from different countries, and increasing the number of working hours that may reach 3 working periods within 24 days, which contributes to raising productivity three times. Finally, it helps managers to pay attention to the role of virtual work in expanding the geographical scope of the target market, which may increase the opportunities for companies to grow in international markets instead of being limited to local markets.

**Conclusion**

There is increasing international business growth outside the borders of the mother countries, which was manifested in the growth of the number of multinational companies that invaded the world, and this growth was accompanied by a large employment of information and communication technology, which enabled companies to build virtual work sites to take advantage of the characteristics and benefits of global virtual teams. The current study aimed to discover the most important benefits of global virtual teams in the growth of international business.

The study concluded that the global virtual teams contribute to the growth of this business in three main ways, which is by reducing fixed and variable costs such as building rental costs, travel and transportation costs, and recruitment costs, as the percentage of the intention to stay increases among virtual employees compared to traditional employees. The study also concluded that global virtual teams contribute to increasing productivity in various ways, such as hiring the best global talents from different countries, and increasing the number of working hours from 8 hours to 24 hours a day, taking advantage of the time differences of countries, as well as by creating the best solutions to complex problems. Finally, the study concluded that the global virtual teams contribute to increasing the market share by expanding the geographical scope of the cross-border target market and by being flexible in responding quickly to changes in global markets and quickly adapting to them to meet global demand.

**Limitations and Directions for Future Research**

Our research was purposefully designed with several boundary conditions. Future researchers may benefit by exploring beyond those conditions. First, researchers may wish to increase the time range for the content analysis of previous studies to include a larger number of years. Secondly, the benefits of virtual teams can be explored in depth through the Systematic Literature Review. Thirdly, the benefits of employing virtual teams can be analyzed by following the quantitative methodology through a survey study on a number of multinational companies.

**References**

- Abarca, V. M. G., Palos-Sanchez, P. R., & Rus-Arias, E. (2020). Working in Virtual Teams: A Systematic Literature Review and a Bibliometric Analysis. *IEEE Access*, 8, 168923–168940. <https://doi.org/10.1109/access.2020.3023546>
- Al Uwaisi, M., & Devi, R. (2022). Online Work from Home: Issues and Challenges. *International Journal of Academic Research in Business and Social Sciences*, 12(11), 425–436. <https://doi.org/10.6007/ijarbss/v12-i11/15574>
- Bartsch, S., Weber, E., Büttgen, M., & Huber, A. (2020). Leadership matters in crisis-induced digital transformation: how to lead service employees effectively during the COVID-19 pandemic. *Journal of Service Management*, 32(1), 71–85. <https://doi.org/10.1108/JOSM-05-2020-0160>
- Ben Sedrine, S., Bouderbala, A., & Nasraoui, H. (2020). Leadership style effect on virtual team efficiency: trust, operational cohesion and media richness roles. *Journal of Management Development*, 40(5), 365–388. <https://doi.org/10.1108/JMD-10-2018-0289>
- Capolupo, N., Palumbo, R., & Adinolfi, P. (2022). All That Glitters Is Not Gold. Exploring Virtual Team Adoption in the Covid-19 Era. *International Journal of Entrepreneurial Knowledge*, 10(1), 46–64. <https://doi.org/10.37335/ijek.v10i1.148>

- Cheng, X., Bao, Y., Yu, X., & Shen, Y. (2021). Trust and Group Efficiency in Multinational Virtual Team Collaboration: A Longitudinal Study. *Group Decision and Negotiation*, 0123456789. <https://doi.org/10.1007/s10726-020-09722-x>
- Davidaviciene, V., Majzoub, K. Al, & Meidute-Kavaliauskiene, I. (2020). Factors affecting decision-making processes in virtual teams in the UAE. *Information (Switzerland)*, 11(10), 1–13. <https://doi.org/10.3390/info11100490>
- Efimov, I., Harth, V., & Mache, S. (2020). Health-oriented self- and employee leadership in virtual teams: A qualitative study with virtual leaders. *International Journal of Environmental Research and Public Health*, 17(18), 1–19. <https://doi.org/10.3390/ijerph17186519>
- Elyousfi, F., Anand, A., & Dalmasso, A. (2021). Impact of e-leadership and team dynamics on virtual team performance in a public organization. *International Journal of Public Sector Management*. <https://doi.org/10.1108/IJPSM-08-2020-0218>
- Eseryel, U. Y., Crowston, K., & Heckman, R. (2020). Functional and Visionary Leadership in Self-Managing Virtual Teams. *Group and Organization Management*. <https://doi.org/10.1177/1059601120955034>
- Youssef, F. M., Eid, F. A., & Khodeir, M. L. (2022). Challenges affecting efficient management of virtual teams in construction in times of the COVID-19 pandemic. *Ain Shams Engineering Journal*, 14(7), 102008. <https://doi.org/10.1016/j.asej.2022.102008>
- Garro-Abarca, V., Palos-Sanchez, P., & Aguayo-Camacho, M. (2021). Virtual Teams in Times of Pandemic: Factors That Influence Performance. *Frontiers in Psychology*, 12(February), 1–14. <https://doi.org/10.3389/fpsyg.2021.624637>
- Glikson, E., & Erez, M. (2020). The emergence of a communication climate in global virtual teams. *Journal of World Business*, 55(6), 101001. <https://doi.org/10.1016/j.jwb.2019.101001>
- González-Anta, B., Orengo, V., Zornoza, A., Peñarroja, V., & Gamero, N. (2021). Sustainable virtual teams: Promoting well-being through affect management training and openness to experience configurations. *Sustainability (Switzerland)*, 13(6). <https://doi.org/10.3390/su13063491>
- Han, S. J., Kim, M., Beyerlein, M., & DeRosa, D. (2020). Leadership Role Effectiveness as a Mediator of Team Performance in New Product Development Virtual Teams. *Journal of Leadership Studies*, 13(4), 20–36. <https://doi.org/10.1002/jls.21677>
- Li, J., Wan, X., & Wang, X. (2020). Effects social capital and knowledge integration on innovation performance: an example of virtual teams. *Revista de Cercetare Si Interventie Sociala*, 69, 227–240. <https://doi.org/10.33788/rcis.69.14>
- Lin, C. N., & Roan, J. (2021). Identifying the development stages of virtual teams – An application of social network analysis. *Information Technology and People*. <https://doi.org/10.1108/ITP-04-2020-0251>
- Mayer, C., Mutze-Niewohner, S., & Nitsch, V. (2020). Empirical classification of advanced information technology towards their support of leadership behaviors in virtual project management settings. *IEEE International Conference on Industrial Engineering and Engineering Management, 2020-Decem*, 275–279. <https://doi.org/10.1109/IEEM45057.2020.9309948>
- Morrison-Smith, S., & Ruiz, J. (2020). Challenges and barriers in virtual teams: a literature review. In *SN Applied Sciences* (Vol. 2, Issue 6). Springer International Publishing. <https://doi.org/10.1007/s42452-020-2801-5>
- Muller, R., & Antoni, C. H. (2020). Individual perceptions of shared mental models of

- information and communication technology (ICT) and virtual team coordination and performance—the moderating role of flexibility in ICT use. *Group Dynamics*, 24(3), 186–200. <https://doi.org/10.1037/gdn0000130>
- Mysirlaki, S., & Paraskeva, F. (2020). Emotional intelligence and transformational leadership in virtual teams: lessons from MMOGs. *Leadership and Organization Development Journal*, 41(4), 551–566. <https://doi.org/10.1108/LODJ-01-2019-0035>
- Newman, S. A., & Ford, R. C. (2021). Five Steps to Leading Your Team in the Virtual COVID-19 Workplace. *Organizational Dynamics*, 50(1), 100802. <https://doi.org/10.1016/j.orgdyn.2020.100802>
- Newman, S. A., Ford, R. C., & Marshall, G. W. (2020). Virtual Team Leader Communication: Employee Perception and Organizational Reality. *International Journal of Business Communication*, 57(4), 452–473. <https://doi.org/10.1177/2329488419829895>
- Presbitero, A. (2020). Foreign language skill, anxiety, cultural intelligence and individual task performance in global virtual teams: A cognitive perspective. *Journal of International Management*, 26(2), 100729. <https://doi.org/10.1016/j.intman.2019.100729>
- Purvanova, R. K., Charlier, S. D., Reeves, C. J., & Greco, L. M. (2020). Who Emerges into Virtual Team Leadership Roles? The Role of Achievement and Ascription Antecedents for Leadership Emergence Across the Virtuality Spectrum. *Journal of Business and Psychology*. <https://doi.org/10.1007/s10869-020-09698-0>
- Randazzo-davis, M., & Nelson, C. (2020). International business education using global virtual teams: Relationship between cultural intelligence, global knowledge, and team performance. *International Journal for Business Education*, 160(1). <https://doi.org/10.30707/ijbe160.1.1648090946.651113>
- Randazzo-Davis, M., & Nelson, C. (2020). International Business Education Using Global Virtual Teams: Relationship between Cultural Intelligence, Global Knowledge, and Team Performance. *International Journal for Business Education*, 160, 42–61.
- Rober, L. P. (2020). Behavior–output control theory, trust and social loafing in virtual teams. *Multimodal Technologies and Interaction*, 4(3), 1–22. <https://doi.org/10.3390/mti4030039>
- Rogers, B. L., Madden, L. T., Grubb, L. K., & Karriker, J. H. (2021). Shouting across the digital divide: the import of social interactions in virtual teams. *Team Performance Management*, 27(1–2), 1–14. <https://doi.org/10.1108/TPM-05-2020-0042>
- Sagar, S. K., Arif, M., Oladinrin, O. T., & Rana, M. Q. (2022). Challenges negating virtual construction project team performance in the Middle East. *Built Environment Project and Asset Management*, ahead-of-p(ahead-of-print). <https://doi.org/10.1108/bepam-08-2021-0104>
- Sagar, S. K., Oladinrin, O. T., Arif, M., & Rana, M. Q. (2022). Interpretive structural model of trust factors in construction virtual project teams. *Construction Innovation*. <https://doi.org/10.1108/CI-09-2021-0179>
- Schuster, N. (2022). New Work in China – Work From Home, 996 and Employee Motivation. *International Journal of Academic Research in Business and Social Sciences*, 12(3), 428–440. <https://doi.org/10.6007/ijarbss/v12-i3/12885>
- Shaik, F. F., Makhecha, U. P., & Gouda, S. K. (2021). Work and non-work identities in global virtual teams: Role of cultural intelligence in employee engagement. *International Journal of Manpower*, 42(1), 51–78. <https://doi.org/10.1108/IJM-03-2019-0118>
- Soon, C. C., & Salamzadeh, Y. (2020). THE IMPACT OF DIGITAL LEADERSHIP COMPETENCIES ON VIRTUAL TEAM EFFECTIVENESS IN MNC COMPANIES IN Chee Cheng Soon ; Yashar

*Salamzadeh Introduction Industry forward National Policy on Industry 4 . 0 report has mentioned that under a global view , a series of. 8(2), 219–253.*

Turesky, E. F., Smith, C. D., & Turesky, T. K. (2020). A call to action for virtual team leaders: practitioner perspectives on trust, conflict and the need for organizational support. *Organization Management Journal, ahead-of-p*(ahead-of-print).

<https://doi.org/10.1108/omj-09-2019-0798>

Velez-Calle, A., Mariam, M., Gonzalez-Perez, M. A., Jimenez, A., Eisenberg, J., & Santamaria-Alvarez, S. M. (2020). When technological savviness overcomes cultural differences: millennials in global virtual teams. *Critical Perspectives on International Business, 16*(3), 279–303. <https://doi.org/10.1108/cpoib-01-2018-0012>

Zaharie, M. (2021). Challenges, trust and performance in virtual teams: examining the role of openness to experience and preference for virtual teams. *Team Performance Management. https://doi.org/10.1108/TPM-07-2020-0066*

Zeuge, A., Weigel, A., Bjorn, N., Frederike, O., & Michael, S. (2020). *Leading Virtual Teams -A Literature Review Leading Virtual Teams – A Literature Review. August.*

Zhang, Y., Li, T., Yu, X., & Tang, Y. (2022). Task interdependence and Moqi in virtual teams in China: the mediating role of virtual collaboration and the moderating role of distributive justice climate. *Chinese Management Studies, 16*(1), 1–25.

<https://doi.org/10.1108/CMS-06-2020-0264>

Zuofa, T., & Ochieng, E. G. (2021). Investigating Barriers to Project Delivery using Virtual Teams. *Procedia Computer Science, 181*(2019), 1083–1088.

<https://doi.org/10.1016/j.procs.2021.01.304>