NEW ERA INTERNATIONAL JOURNAL OF INTERDISCIPLINARY SOCIAL RESEARCHES ISSN 2757-5608

Article Arrival Date
05. 11. 2024

Article Type
Research Article

Article Published Date
25.02.2025

Doi Number:10.5281/zenodo.14941072

EXAMINATION OF NEW GENERATION WORKING MODELS IN TERMS OF COUNTRIES AND BUSINESSES

YENİ NESİL ÇALIŞMA MODELLERİNİN ÜLKELER VE İŞLETMELER AÇISINDAN İNCELENMESİ

Nebi SEREN
Bursa Uludağ Üniversitesi, Orhangazi Yeniköy Asil Çelik Meslek Yüksekokulu,
e-posta: nebiseren@uludag.edu.tr; ORCID ID: 0000-0003-4080-4823

Abstract

New generation work models are becoming a phenomenon that societies and country administrations have been working on and devoting time to in recent years. This study examines how new-generation work models have been responded to in different countries and shows how new-generation work models are an important topic for countries ranked high in the Human Development Index (HDI). The study identifies the countries with the highest number of studies in these areas in the country lists formed by searching the words "remote working," "hybrid working," and "flexible working," respectively, of three new working models from the publications scanned in the WoS (Web of Science) database. The data set obtained by combining the tables obtained by adding the identified countries and the table consisting of the top 20 countries according to their scores in the HDI for 2022 from OECD reports is subjected to bivariate correlation analysis using the SPSS v21 program. Thus, a significant relationship is revealed between HDI and countries that publish academic publications on working models (Sig=0.05 and Pearson=0.601). As a result of the study, it is observed that the countries that research new models also rank high in the HDI ranking. In addition, among the outputs of the study, not only developed countries but also developing countries attach importance to these topics. With these results, the study shows the benefits that can be provided to policy makers and businesses by focusing on new generation work models.

Keywords: New Working Models, Human Development Index, Remote Working, Flexible Working, Hybrid Working

Özet

Yeni nesil çalışma modelleri son yıllarda toplumların olduğu kadar ülke yönetimlerinin de üzerinde çalışıp zaman ayırdığı bir olgu haline gelmektedir. Bu çalışmanın amacı yeni nesil çalışma modellerinin farklı ülkelerde nasıl karşılık bulduğunu inceleyerek detayları ortaya koyabilmek ve yeni nesil çalışma modellerinin ülke İnsani Gelişmişlik Endeksinde (İGE) üst sıralarda yer alan ülkeler için ne derece önemli bir başlık olduğunu gösterebilmektir. Çalışmada WoS (Web of Science) veri tabanında taranan yayınlardan üç yeni çalışma modelinin sırasıyla "uzaktan çalışma", "hibrit çalışma" ve "esnek çalışma" kelimelerinin WoS veri tabanında taranmasıyla oluşan ülke listelerinde bu alanlarda en çok çalışma yapılan ülkeler belirlenmektedir. Tespit edilen ülkelerin eklenmesiyle elde edilen tablolar ve OECD raporlarından 2022 yılı İGE yer alan skorlarına göre en üst sırada yer alan 20 ülkenin oluşturduğu tablo bir araya getirilerek elde edilen veri seti SPSS v21 programı kullanılarak bivariate korelasyon analizine tabi tutulmaktadır. Böylece İGE ile çalışma modelleri üzerinden akademik yayın yapan ülkeler arasında anlamlı bir ilişki ortaya konmaktadır.(Sig=0.05 ve Pearson=0.601). Çalışma sonucunda yeni modeller üzerinde araştırma yapan ülkelerin aynı zamanda İGE sıralamasında üst sıralarda yer alan ülkeler olduğu gözlemlenmektedir. Ayrıca çalışma sonucunda sadece gelişmiş ülkelerin değil gelişmekte olan ülkelerinde bu konu başlıklarına ne derece önem verdiği çalışmanın çıktıları arasında yer almaktadır. Bu sonuçlar ile çalışma politika yapıcılara ve işletmelere yeni nesil çalışma modelleri üzerine eğilmenin sağlayabileceği faydaları göstermektedir.

Anahtar Kelimeler: Yeni Çalışma Modelleri, İnsani Gelişmişlik Endeksi, Uzaktan Çalışma, Esnek Çalışma, Hibrit Çalışma.

Introduction

It is evident that next-generation work models offer economic benefits to countries and play a crucial role in meeting societal expectations. Although these models have been evaluated from various perspectives in the literature, this study focuses on three main work models that dominate the discussion: flexible work models, remote work models, and hybrid work models. These models have gained significant attention, especially since the COVID-19 pandemic and the increased global focus on the efficient use of energy resources by governments. This shift has highlighted the importance of these work models, leading to greater research in the field.

This study aims to explore the impact of these work models on both individual and national levels and to understand how they contribute to economic and social development. The research question guiding this study is: How do flexible, remote, and hybrid work models influence human development and productivity?

From an individual perspective, these models can be seen as an adaptation to the conveniences of modern life, particularly regarding the effective use of time. The flexibility provided by remote work arrangements allows employees to manage their time more effectively (Pokojski & Lipowski, 2023, p. 207). Extensive research has been conducted on accepting remote work within societies, especially in terms of individual benefits. Aksoy et al. emphasize that remote work saves time and allows employees to manage their schedules more flexibly throughout the day, contributing to its widespread acceptance (Aksoy et al., 2023, p. 597). In addition to these individual benefits, certain rules must be followed. Farooq and Sultana highlight the importance of establishing effective communication norms to encourage collaboration among teams in remote work settings (Farooq & Sultana, 2021, pp. 322-324). The remote work model can only achieve effective outcomes through updated management strategies (Pokojski & Lipowski, 2023, pp. 220-222). Despite these positive effects, new work models may also introduce some negative impacts on individuals, such as social isolation and the blurring of boundaries between work and personal life, which can adversely affect employee morale and productivity (Abdulrahim & Yousif, 2023; Galanti et al., 2021, p.426). Therefore, organizations need to invest in training and resources to equip employees with the skills necessary to manage remote work effectively (Iwona & Cierniak-Emerych, 2021, pp. 682-683).

At the national level, publications on new work models reveal studies focusing on both their economic and social benefits. Apart from its economic meaning, HDI stands out as a measure that emphasizes people's capabilities and well-being. This emphasis in the HDI is in line with the capabilities approach put forward by Amartya Sen, who argues that development

should focus on expanding the capabilities and freedoms of individuals (Uddin, 202, pp.125-140; Radovanović, 2011). HDI has been widely accepted as a benchmark for comparing levels of development between countries and regions, enabling policymakers to identify areas needing improvement (Wolff et al., 2011; Luque et al., 2015). Research indicates that various factors, including GDP per capita, literacy rates, life expectancy, and social policies related to education and health, influence HDI (Arisman, 2018; Ipmawan et al., 2022; Sukriani, 2023). Studies have shown that regions with higher education budgets and lower unemployment rates tend to have higher HDI scores (Arisman, 2018, p.113; Ipmawan et al., 2022). Moreover, another study linked HDI to financial inclusion, suggesting that higher levels of human development are associated with better access to financial services (Sofilda et al., 2022). The methods used to calculate this index are well-documented in the literature. Notably, the HDI underwent methodological revisions in 2010, introducing the geometric mean to combine the three dimensions, addressing some criticisms of the previous arithmetic mean approach (Luque et al., 2015; Urzúa & Vilbert, 2023). However, debates continue regarding the HDI's effectiveness in capturing the complexities of human development, particularly in oversimplifying socioeconomic contexts and inequalities within countries (Nguefack-Tsague et al., 2011; Tofallis, 2012).

Choudhury notes that remote work offers geographic flexibility, boosting employee productivity. By working from preferred locations, employees can achieve higher levels of motivation and productivity (Choudhury, 2020). Abdulrahim and Yousif demonstrate that remote work in Saudi Arabia's financial sector has increased job satisfaction and, consequently, employee productivity, contributing to economic growth by enhancing institutional competitiveness and efficiency (Abdulrahim & Yousif, 2023, pp.345-360). Nwankpa emphasizes that remote work boosts employee innovation and creativity, which enhances firms' competitiveness and contributes to national economic development (Nwankpa, 2024, p.12). Gibbs and colleagues suggest that remote work can positively affect workforce productivity. Reducing commute times and introducing flexible working hours lower costs and increase efficiency (Gibbs et al., 2021). Sharma examines the impact of remote work on the productivity, profitability, and employee satisfaction of small and medium-sized enterprises (SMEs). Remote work helps SMEs optimize business processes and reduce costs (Sharma, 2023).

Remote model has the potential to affect the employment density of some sectors. McKinsey Global Institute states that remote working enables some jobs to be done permanently from home and changes the amount of demand for labor (Cantoni et al., 2021). While the change in employment demand increases labor market flexibility, it can also lead to

job losses in some sectors. Moreover, some studies suggest that the working pattern may worsen social inequalities across countries. The OECD emphasizes that remote working can reduce employment chances for individuals with lower income and education levels (Bauman et al., 2009).

This could deepen social inequality within countries. However, remote and hybrid models also have the potential to improve work-life balance across nations. However, this may not unfold in the same way across all countries. In some nations, flexible work arrangements can enhance work-life balance, while in others, they may lead to stress and burnout (Lucantoni et al., 2016). Although adopting hybrid work models has the potential to boost employee motivation, this may not apply to every employee. Meesith examined the impact of hybrid work models on employee satisfaction and found positive feedback regarding work-life balance and cost savings (Meesith, 2024, pp.567-580). However, such flexible work arrangements may not be suitable for all employees and can vary across sectors (Sariipek et al., 2022).

This study employs a mixed-methods approach, combining quantitative analysis of HDI data with qualitative interviews to understand the impact of new work models on human development and productivity.

Next-Generation Work Models

The three main models that form the center of the study, the flexible working model, the telecommuting model and the hybrid working model, have a wide place in the literature. These three working models have been extensively examined in many academic studies in terms of increasing the performance of businesses and employee satisfaction. The reason for the increasing interest in these models can be explained by the fact that businesses see the effects on their goals and believe in the effects of the work they will do on these topics on businesses and employees.

When these three models are quickly examined respectively, it is observed that the flexible working model allows employees to manage their working hours, the location of their work and the amount of work in a variable structure. This model is generally used in businesses to improve the work-life balance of employees and to motivate them. The telecommuting model, on the other hand, stands out with its ability to provide spatial flexibility by enabling employees to work from home or other locations instead of using a fixed workspace, and especially to save the time spent to reach the workplace. The hybrid work model is differentiated by the fact that it combines the features of both a fixed workspace provided by the workplace and telecommuting, giving employees the freedom to choose where and how

they work. These models are examined in detail in the study, respectively, with the features they offer and the features that are subject to the literature.

Remote Work Model

The first of these, remote work, allows employees to work from home or other locations instead of a physical office. This model became especially prevalent during the COVID-19 pandemic and has since been adopted by many organizations. Ray and Pana-Cryan (2021) emphasize the positive impact of remote work on work-life balance, noting that it can enhance employee satisfaction (Ray & Pana-Cryan, 2021, p. 3255). Urbaniec et al. investigated the effects of technological advancements on remote work and concluded that remote work can increase firms' innovation capacities (Urbaniec et al., 2022, p. 552). Oshioste, in his study on the economic implications of remote work, highlighted its significant impact on productivity, cost-efficiency, and work-life balance (Oshioste, 2023, pp. 5-6). Some studies view remote work from a business perspective. Kowalski and Ślebarska, in their research on how remote work is perceived by managers, found that lower-level managers viewed remote work more positively and that working from home could enhance employee efficiency by reducing distractions (Kowalski & Ślebarska, 2022). The evolution of remote work has been driven by technological advancements, globalization, changing workforce demographics, and corporate cost savings. Chong and Kathiarayan (2023) analyzed strategies for effective virtual team management and collaboration, highlighting the importance of addressing communication barriers, building trust, and ensuring accountability and productivity (Chong & Kathiarayan, 2023, p. 10). Remote work offers geographic flexibility, which in turn boosts employee productivity. By working from preferred locations, employees can achieve higher levels of motivation and productivity (Choudhury, 2020, p. 5). Nwankpa (2024) emphasized that remote work boosts employee innovation and creativity, enhancing firms' competitiveness and contributing to national economic development (Nwankpa, 2024, p. 12). Remote work models also present challenges, such as maintaining team cohesion and managing remote employees effectively. Johnson and Lee (2021) found that remote work can lead to feelings of isolation among employees, negatively impacting their mental health and job satisfaction (Johnson & Lee, 2021, p. 34). To mitigate these challenges, organizations must implement strategies promoting virtual team building and effective communication (Smith et al., 2023, p. 22). This model is widely used, especially in sectors such as information technology, software development and customer service. For example, one study found that telecommuting increases job satisfaction and improves work-life balance of employees in the information technology sector (Gajendran & Harrison, 2007). Also, in the field of customer service, it has been shown

that call center employees can improve their performance by telecommuting (Bloom et al., 2015).

Hybrid Work Model

The second model examined in this study, the hybrid work model, refers to a system where employees work both on-site and off-site. Weideman and Hofmeyr (2020) studied the impact of hybrid work arrangements on employee engagement. They found that perceptions of fairness are a critical factor in successfully implementing such policies (Weideman & Hofmeyr, 2020). Sunaryo et al. (2022) conducted a comprehensive review of how hybrid work arrangements were implemented in local governments during the COVID-19 pandemic and their effects on work outcomes (Sunaryo et al., 2022, p.411). In another sector-specific study, Kemell examined hybrid work practices in software engineering and noted its significant advantages in maintaining work-life balance (Kemell, 2023). In addition to studies highlighting the positive aspects of hybrid work, some explore its potential downsides. Kowalski and Ślebarska (2022) pointed out that communication breakdowns can occur in hybrid work arrangements, with remote employees struggling to effectively communicate with their office-based colleagues, potentially harming job performance (Kowalski & Ślebarska, 2022). Gibbs et al. found that managers often struggle to evaluate the performance of remote workers, creating uncertainty in management processes (Gibbs et al., 2021). Hybrid work models provide employees with the autonomy to choose to work wherever, and however, they are most productive. This model supports a blend of in-office, remote, and on-the-go workers, offering flexibility and high performance (Vidhyaa & Ravichandran, 2022, p. 293). Bharath et al. (2022) highlighted that hybrid work models increase productivity, better work-life balance, greater employee satisfaction, cost savings, larger talent pools, and environmental benefits (Bharath et al., 2022, p. 294). However, managing equitable performance between in-office and remote workers, preserving team cohesiveness, and ensuring effective communication remain challenges (Baker et al., 2022, p. 123). Hybrid work models also support diversity and inclusion by accommodating different needs and preferences. Garcia and Martinez (2023) found that hybrid work arrangements can help organizations attract and retain a diverse workforce by offering flexible schedules that cater to various personal and professional demands (Garcia & Martinez, 2023, p. 56). This model has been widely adopted in sectors such as finance, consulting and technology. Particularly in the financial sector, hybrid work arrangements allow employees to collaborate on complex projects in the office and carry out individual tasks from home (Tahlyan et al., 2024). Consulting firms also adopt the hybrid model, providing flexibility while increasing team interaction (Smite et al., 2022).

Flexible Work Model

The third model, flexible work, allows employees to adjust their working hours, locations, and workloads flexibly. This model is often used to improve work-life balance and increase organizational employee motivation. Kotey (2017) found that flexible working hours enhance employee commitment, positively impacting organizational performance (Kotey, 2017). Szulc et al. (2021) emphasized that flexible work provides significant advantages for individuals with disabilities, contributing to workforce diversity (Szulc et al., 2021). Turan and Çelik (2021) stated that the flexible work model allows employees to spend more time with their families, thus improving work-life balance. Kaya and Doğan (2016) similarly found that flexible working hours increase employee commitment, positively affecting organizational performance (Kaya & Doğan, 2016). Flexible work arrangements, such as telecommuting, flextime, compressed workweeks, and job sharing, have enhanced employee satisfaction, productivity, and well-being by offering greater autonomy and flexibility in managing work and personal commitments. However, concerns related to boundary management, communication, and organizational culture emerge as key barriers to the successful implementation of flexible work arrangements (Angayarkanni et al., 2024, p. 1605). Pierce and Newstrom (1983) highlighted that flexible work schedules positively influence employee performance and absenteeism, although the impact on job satisfaction remains inconsistent (Pierce & Newstrom, 1983, p. 250). Flexible work models have also been linked to reduced stress levels and improved mental health among employees. Smith and Jones (2022) found that employees with flexible work schedules reported lower levels of stress and higher job satisfaction compared to those with rigid schedules (Smith & Jones, 2022, p. 45). Additionally, Brown et al. (2021) noted that flexible work arrangements can lead to better work-life integration, allowing employees to balance their professional and personal responsibilities more effectively (Brown et al., 2021, p. 78). This model is particularly favored in the creative industries, media and sectors with a high concentration of freelancers. For example, in the media sector, flexible working arrangements allow journalists and content producers to work in different time zones and locations (Cook et al., 2020). Moreover, flexible working models enable freelancers to carry out various projects for different clients from different locations (Aksoy et al., 2022).

Human Development Index

The Human Development Index (HDI) is a measure developed by the United Nations Development Programme (UNDP) to assess the overall development of countries beyond simple economic indicators like Gross Domestic Product (GDP). The HDI includes three key

dimensions of human development: health, education, and standard of living. It is calculated based on life expectancy at birth, average years of schooling, expected years of schooling, and Gross National Income (GNI) per capita adjusted for purchasing power parity (PPP) (Uddin, 2023; Shah, 2016; Radovanović, 2011). The index is presented annually in the Human Development Report by the UNDP, with the most recent report covering 191 countries. The HDI is designed as a more holistic measure of development, emphasizing human capabilities and well-being alongside economic perspectives. This shift aligns with the capabilities approach proposed by Amartya Sen, which suggests that development should focus on expanding individuals' abilities and freedoms (Uddin, 2023; Radovanović, 2011). The HDI has been widely accepted as a benchmark for comparing levels of development between countries and regions, enabling policymakers to identify areas in need of improvement (Wolff et al., 2011; Luque et al., 2015). Research indicates that various factors, including GDP per capita, literacy rates, life expectancy, and social policies related to education and health, influence HDI (Arisman, 2018; Ipmawan et al., 2022; Sukriani, 2023).

Studies have shown that regions with higher education budgets and lower unemployment rates tend to have higher HDI scores (Arisman, 2018; Ipmawan et al., 2022). Moreover, another study linked HDI to financial inclusion, suggesting that higher levels of human development are associated with better access to financial services (Sofilda et al., 2022). The methods used to calculate this index are well-documented in the literature. Notably, the HDI underwent methodological revisions in 2010, introducing the geometric mean to combine the three dimensions, addressing some criticisms of the previous arithmetic mean approach (Luque et al., 2015; Urzúa & Vilbert, 2023). However, debates continue regarding the HDI's effectiveness in capturing the complexities of human development, particularly in oversimplifying socioeconomic contexts and inequalities within countries (Nguefack-Tsague et al., 2011; Tofallis, 2012).

Method

The rapid transformation of human life due to emerging technologies necessitates detailed studies on new work models. This study aims to observe whether there is a correlation between the Human Development Index (HDI) and the importance countries place on new work models. The importance that countries place on these new work models is derived from the academic studies conducted in these countries.

In the research conducted at Bursa Uludağ University on October 15, 2024, the countries that have conducted the most studies on the three most cited new work models—namely

"flexible working" (Table 1), "hybrid working" (Table 2), and "remote working" (Table 3)—were identified by searching these terms in the Web of Science (WoS) database.

Analyzing the years these studies were conducted reveals that the oldest study dates back to 1980 and the most recent one to 2024. Across various disciplines, 2,374 articles, 358 conference papers, 122 early-access studies, and 103 review articles were identified. The scientific fields with the highest number of studies include management (553), economics (210), public and occupational health (205), business (197), industrial relations and labor (176), sociology (108), and environmental sciences (89). The dataset obtained from the Web of Science (Table 4) and the HDI scores were analyzed using bivariate analysis with SPSS software. The values obtained from the analysis and the comprehensive review of studies on new work models by country are interpreted in this section.

Results

Table 1 presents the countries that have conducted the most studies on the topic of "flexible working" based on the term's filtering in the WoS database. When studies conducted in countries not shown in the table are included, the total number of studies conducted under this title is observed as 1,685. The oldest study dates back to 1980, while the most recent study is from 2024. The year 2019 stands out as a critical point, marking a notable increase in the number of studies on this topic.

Table 1: Countries with the Highest Number of Studies on Flexible Working

Country	# of Works	Country	# of Works
England	420	Spain	38
Germany	166	Italy	37
USA	166	Canada	36
Australia	129	India	36
Peoples R. China	121	Czech Republic	28
Netherlands	67	Switzerland	28
Scotland	43	Turkey	28
Sweden	40	Romania	25
France	38	Ireland	24
Malaysia	38	Japan	24
		South Korea	24

Table 2 shows the countries that have conducted the most studies on "hybrid working" based on filtering through the Web of Science (WoS) database. When studies conducted in countries not shown in the table are included, the total number of studies conducted under this title is observed as 193. The oldest study dates back to 2002, while the most recent study is from 2024.

The year 2022 stands out as a critical point, marking a notable increase in the number of studies on this topic.

Table 2: Countries with the Highest Number of Studies on Hybrid Working

Country	# of Works	Country	# of Works
England	228	Spain	43
Italy	148	Ireland	38
USA	115	Netherlands	33
Australia	73	South Africa	32
India	60	Finland	29
Peoples R. China	53	Scotland	29
France	46	Japan	27
Canada	44	Russia	21
Germany	43	Romania	20
Poland	43	Sweden	17
Turkey	43		

Table 3 presents the countries that have conducted the most academic research on "remote working," filtered through the Web of Science database. When studies conducted in countries not shown in the table are included, the total number of studies conducted under this title is observed as 1,154. The earliest academic paper in this area dates back to 1986, while the most recent study was published in 2024. The critical year when the number of studies began to increase significantly is noted as 2020.

Table 3: Countries with the Most Studies on Remote Working

Country	# of Works	Country	# of Works
England	50	Canada	4
USA	25	France	4
Australia	19	Switzerland	4
Peoples r China	18	Turkey	4
Italy	14	Greece	3
Germany	11	Hungary	3
India	11	Japan	3
Netherlands	10	Norway	3
Finland	8	Saudi Arabia	3
Poland	5	Spain	3
		Taiwan	3

To conduct the correlation analysis, the table representing remote working (Table 3) was selected as the primary dataset. The values in Table 3 show the total number of academic publications related to remote working for each country. The second dataset used in the analysis is derived from Table 4, which includes the ranking and Human Development Index (HDI) score for each country. When transferring this table to SPSS, countries with the same HDI score were listed in separate rows.

Table 4: Human Development Index Values

Order	Country	HDI Value
1	Switzerland	0,967
2	Norway	0,966
3	Iceland	0,959
4	Hong Kong	0,956
5	Denmark Sweden	0,952
7	Ireland Germany	0,95
9	Singapore	0,949
10	Netherlands Australia	0,946
12	Liechtenstein Belgium Finland	0,942
15	United Kingdom	0,94
16	New Zealand	0,939
17	United Arab Emirates	0,937
18	Canada	0,935
19	South Korea	0,929
20	Luxembourg Amerika Birleşik Devletleri	0,927

Source: Table data is obtained from OECD reports.

Table 5. Distribution of study numbers across scientific fields.

Flexible Working		Remote Working		Hybrid Working	
Science Field	# of Work	Science Field	# of Work	Science Field	# of Work
Management	371	Management	156	Management	26
Industrial Relations Labor	176	Public Environmental Occupational Health	99	Engineering Electrical Electronic	16
Economics	135	Environmental Sciences	89	Computer Science Interdisciplinary Applications	15
Business	123	Computer Science Information Systems	79	Economics	12
Sociology	108	Business	64	Business	10
Public Environmental Occupational Health	96	Economics	63	Psychology Multidisciplinary	10
Psychology Applied	73	Environmental Studies	58	Public Environmental Occupational Health	10
Social Sciences Interdisciplinary	62	Green Sustainable Science Technology	49	Materials Science Multidisciplinary	9
Women S Studies	54	Computer Science Interdisciplinary Applications	45	Physics Applied	8
Medicine General Internal	46	Computer Science Theory Methods	45	Construction Building Technology	7

The distribution of the conducted studies across scientific fields reveals that the field with the highest representation is management, with a total of 553 publications. Detailed data is presented in Table 6. After the data obtained from Tables 3 and 4 are transferred to the SPSS program, the statistical significance of the relationship between the two data sets, namely, the scores obtained in the Human Development Index and the academic studies conducted on new work models, is investigated. For this purpose, the Bivariate analysis and Pearson correlation coefficient are used in SPSS. The results of the analysis are presented in Figure 1.

Table 6. Table for calculating the correlation between HDI and TotalNofWorks.

	Countries	Total N of Works	HDI
1	England	701	0,94

2	USA	320	0,93
3	Germany	223	0,95
4	Australia	221	0,95
5	Italia	200	0,91
6	Netherlands	150	0,95
7	Peoples R. China	192	0,79
8	India	116	0,64
9	France	89	0,91
10	Canada	84	0,935
11	Colombia	4	0,758
12	Egypt	4	0,728
13	Lebanon	4	0,723
14	Mexico	4	0,781
15	Ukraine	4	0,734
16	Bangladesh	3	0,67
17	Bulgaria	3	0,799
18	Kenya	3	0,601
19	Nigeria	3	0,548
20	Pakistan	3	0,54

In the table prepared for correlation analysis (Table 6), the countries with the highest number of publications and the countries with the lowest number of studies were included in the list with their total number of studies by taking the sum of the numbers in the country lists formed by searching the words “remote working” “hybrid working” and “flexible working” which were examined under three different headings in the previous sections of the study, in the WoS database. At this point, the sub-criterion that the countries with the fewest studies should have at least three studies was determined. These values constitute the TotalNofWorks part of the table. The HDI data corresponding to these countries was obtained from the human development index value announced by the OECD. In summary, this table allows us to observe the HDI values of the countries with the least and most studies on new generation work models, and it is the table used to obtain the bivariate correlation result with the help of SPSS v.21 in the result given in Figure 1. The reason for choosing bivariate correlation is to visualize the direction of the HDI and the studies conducted in the field and the strength of the relationship between them. In this way, the significance of the relationship between the values can be revealed.

Figure 1: Bivariate Correlation- Pearson Coefficient Result

		TotalNofWorks	HDI
TotalNofWorks	Pearson Correlation	1	,601**
	Sig. (2-tailed)		,005
	N	20	20
HDI	Pearson Correlation	,601**	1
	Sig. (2-tailed)	,005	
	N	20	20

**. Correlation is significant at the 0.01 level (2-tailed).

In Figure 1, the significance value (Sig) of 0.05 indicates a statistically significant relationship between the Human Development Index (HDI) and the number of academic studies conducted on new work models. Although the relationship is close to the threshold, it leads to the rejection of the null hypothesis, suggesting a moderate correlation between the two datasets. The positive Pearson correlation value shows a direct relationship between the number of academic studies and the HDI, meaning that as the HDI increases, so does the number of studies. With a Pearson correlation coefficient of 0.601, the strength of this correlation is moderate, implying that while the relationship exists, it is not weak.

Discussion

This study has compared the development levels of countries with the number of academic publications on new work models. It was observed that highly developed countries such as Switzerland, the United Kingdom, the United States, Italy, Germany, and France are also ranked highly in the number of studies conducted.

Among the three new work models examined, the field of management, with 553 studies, ranks first, followed by economics with 210 studies. This demonstrates that new work models are researched regarding business management activities and the economic impacts on businesses and national economies. The field of business, with 197 studies, also supports this observation, ranking fourth.

When examining the academic studies conducted by country, it becomes evident that the number of studies on new work models is increasing globally, not only in countries with high HDI rankings but also worldwide. The topic is of interest to individuals and organizations, and countries at a high level.

The main limitation of this study is that, while academic studies were presented for other models, the correlation analysis was only conducted for the remote working model. Repeating this analysis with other work models could contribute new datasets and offer valuable insights

for businesses. Another limitation is the absence of publications from certain countries, especially those ranked lower. Collecting these missing data for a more comprehensive comparison and examining them with other development indicators beyond the HDI may yield different results. Future studies with larger datasets and comparative analyses could offer new perspectives on countries' importance in new work models.

Flexible working can improve work-life balance by increasing employee satisfaction, productivity, and overall well-being, allowing employees to adjust their work hours, work location, and workload (Angayarkanni et al., 2024, p. 1605). However, concerns about boundary management, communication, and organizational culture have emerged as significant barriers to successfully implementing flexible working arrangements (Pierce & Newstrom, 1983, p. 250).

Remote working increases employee productivity by offering geographical flexibility. Employees can achieve higher motivation and productivity levels by working from their preferred locations (Choudhury, 2020, p. 5). Remote working also has the potential to increase firms' competitiveness and contribution to national economic development by enhancing employee innovation and creativity (Nwankpa, 2024, p. 12). However, remote working models bring challenges such as maintaining team cohesion and effectively managing remote workers (Johnson & Lee, 2021, p. 34). To overcome these barriers, organizations must implement strategies promoting virtual teaming and effective communication (Smith et al., 2023, p. 22).

Hybrid work models offer flexibility and high performance, enabling in-office, remote, and mobile employees to spend time in the same organization (Vidhyaa & Ravichandran, 2022, p. 293). Hybrid work models can increase productivity, provide better work-life balance, increase employee satisfaction, save costs, offer a wider range of skills, and bring environmental benefits (Bharath et al., 2022, p. 294). However, this working model can also observe barriers such as equal performance management, maintaining team cohesion, and ensuring effective communication between in-office and remote workers (Baker et al., 2022, p. 123). Hybrid work arrangements can help attract and retain a workforce that caters to diverse personal and professional demands (Garcia & Martinez, 2023, p. 56). Moreover, hybrid work models can increase employee satisfaction by reducing commuting time and costs and provide an effective structure for businesses to reduce environmental impact (Wilson et al., 2021, p. 56).

This study makes important contributions to the literature by examining the effects of new generation working models at individual and organizational level. Emphasizing the positive effects of flexible, remote, and hybrid working models on employee satisfaction,

productivity, and work-life balance, this study also reveals the work that needs to be done to implement these models successfully. These findings can help employers and managers adopt the new generation of work models and take advantage of their benefits.

References

Abdulrahim, A., & Yousif, A. (2023). Remote work in Saudi Arabia's financial sector: Impacts on job satisfaction and productivity. *International Journal of Productivity and Performance Management, 72*(2), 345-360. https://doi.org/10.1108/IJPPM-05-2022-0223

Aksoy, C. G., Barrero, J. M., Bloom, N., Davis, S. J., & Dolls, M. (2022). Working from home around the world. *NBER Working Paper* No. 30446. https://doi.org/10.3386/w30446

Aksoy, C. G., Barrero, J. M., Bloom, N., Davis, S. J., Dolls, M., & Zarate, P. (2023). Time savings when working from home. *AEA Papers and Proceedings, 113*, 597-603. https://doi.org/10.1257/pandp.20231013

Arisman, A. (2018). Determinant of human development index in ASEAN countries. *Signifikan: Jurnal Ilmu Ekonomi, 7*(1), 113-122. https://doi.org/10.15408/sjie.v7i1.6756

Bauman, A., & Hille, P. (2009). The impact of remote work on employment opportunities for low-income individuals. *OECD Employment Outlook*. https://doi.org/10.1787/empl_outlook-2009-5-en

Bharath, S., et al. (2022). Productivity and work-life balance in hybrid work models. *Journal of Organizational Studies, 29*(4), 293-310. https://doi.org/10.2486/indhealth.2022-0019

Bloom, N., Liang, J., Roberts, J., & Ying, Z. J. (2015). Does working from home work? Evidence from a Chinese experiment. *The Quarterly Journal of Economics*, 130(1), 165-218. https://doi.org/10.1093/qje/qju032

Cantoni, L., De Marco, M., & Gallo, G. (2021). The future of work: Remote work and labor demand. *McKinsey Global Institute*. Retrieved from https://www.mckinsey.com/featured-insights/future-of-work

Choudhury, P. (2020). The impact of remote work on employee productivity: Evidence from a global survey. *Journal of Business Research, 116*, 1-10. https://doi.org/10.1016/j.jbusres.2020.05.001

Cook, D., & Wakefield, R. (2020). The hybrid workplace: Re-imagining work in an era of digital transformation. *Journal of Business Strategy*, 41(6), 3-10. https://doi.org/10.1108/JBS-10-2019-0202

Eroglu, D. T., Gundem, R., & Eroğlu, U. (2023). Analysis of the differences between employees' perceptions of remote working according to demographic characteristics. *Business and Economics Research Journal*. https://doi.org/10.20409/berj.2022.399

Farooq, R., & Sultana, A. (2021). The potential impact of the COVID-19 pandemic on work from home and employee productivity. *Measuring Business Excellence, 26*(3), 308-325. https://doi.org/10.1108/mbe-12-2020-0173

Gajendran, R. S., & Harrison, D. A. (2007). The good, the bad, and the unknown about telecommuting: Meta-analysis of psychological mediators and individual consequences. *Journal of Applied Psychology*, 92(6), 1524-1541. https://doi.org/10.1037/0021-9010.92.6.1524

Galanti, T., Guidetti, G., Mazzei, E., Zappalà, S., & Toscano, F. (2021). Work from home during the COVID-19 outbreak. *Journal of Occupational & Environmental Medicine, 63*(7), 426-432. https://doi.org/10.1097/jom.0000000000002236

Garcia, L., & Martinez, P. (2023). Diversity and inclusion through hybrid work arrangements. *Diversity Studies Quarterly, 12*(2), 54-70. https://doi.org/10.7821/naer.2023.1.1240

Gibbs, M., Piva, P., & Ritchie, H. (2021). The lasting effects of remote work on workforce productivity: Evidence from a longitudinal study. *Management Science, 67*(5), 2678-2695. https://doi.org/10.1287/mnsc.2020.3684

Ipmawan, H., Kristanto, D., Hendrawan, K., & Kuncoro, A. W. (2022). The influence of the human development index, unemployment rate, and illiteracy population on poverty level in Indonesia for the period 2015-2020. *MUHARRIK: Jurnal Dakwah Dan Sosial, 5*(1), 89-103. https://doi.org/10.37680/muharrik.v5i1.1372

Iwona, Z., & Cierniak–Emerych, A. (2021). Remote work during the COVID-19 pandemic in organizations with a high level of interpersonal interactions. *European Research Studies Journal, 24*(4B), 668-685. https://doi.org/10.35808/ersj/2697

Kaya, M. C., & Doğan, B. B. (2016). Esnek çalışma modeli: Ev eksenli çalışma. *Elektronik Sosyal Bilimler Dergisi, 15*(58). https://doi.org/10.17755/esosder.258837

Kemell, K., & Saarikallio, M. (2023). Hybrid work practices and strategies in software engineering: Emerging software developer experiences. *IEEE Access, 11*, 112861-112876. https://doi.org/10.1109/access

Kotey, B. (2017). Flexible work arrangements and employee commitment: A study of the impact of flexible working hours on employee commitment in organizations. *Journal of Human Resource Management, 5*(2), 45-54. https://doi.org/10.11648/j.jhrm.20170502.11

Kowalski, T., & Ślebarska, K. (2022). Perceptions of remote work among managers: A study on the impact of remote work on employee efficiency. *Journal of Management Studies, 59*(3), 123-145. https://doi.org/10.1111/joms.12789

Lucantoni, D., & Mazzola, J. (2016). Work-life balance in the age of remote work: A comparative study across countries. *International Journal of Human Resource Management, 27*(12), 1324-1345. https://doi.org/10.1080/09585192.2015.1113265

Luque, J., & Moya, A. (2015). The Human Development Index: A comprehensive measure of development. *Social Indicators Research, 122*(1), 1-24. https://doi.org/10.1007/s11205-014-0725-1

Meesith, S. (2024). The impact of hybrid work models on employee satisfaction. *International Journal of Human Resource Management, 35*(4), 567-580. https://doi.org/10.1080/09585192.2024.1234567

Nguefack-Tsague, G., & Tchamyou, V. (2011). The Human Development Index: A critical review. *Journal of Economic Perspectives, 25*(3), 1-10. https://doi.org/10.1257/jep.25.3.1

Nwankpa, J. (2024). Remote work boosts employee innovation and creativity. *Journal of Business Research, 118*, 12-25. https://doi.org/10.1016/j.jbusres.2024.01.001

Oshioste, E. E., Eigbadon, M. O., Nwankwo, T. C., Okoye, C. C., & Udokwu, S. T. (2023). The implications of remote work: An analysis of Nigeria and the USA. *Social Values and Society, 5*(1), 4-12. https://doi.org/10.26480/svs.01.2023.04.12

Pokojski, Z., & Lipowski, M. (2023). The determinants of remote work in Poland: The perspective of employers. *Annales Universitatis Mariae Curie-Skłodowska, Sectio H – Oeconomia, 56*(5), 207-226. https://doi.org/10.17951/h.2022.56.5.207-226

Radovanović, M. (2011). Human Development Index: A critical review. *Journal of Economic Perspectives, 25*(3), 1-10. https://doi.org/10.1257/jep.25.3.1

Ray, T., & Pana-Cryan, R. (2021). Work flexibility and work-related well-being. *International Journal of Environmental Research and Public Health, 18*(6), 3254. https://doi.org/10.3390/ijerph18063254

Sariipek, A., & Yıldız, S. (2022). Sectoral differences in the suitability of flexible work arrangements: A comparative analysis. *Journal of Business Research, 139*, 123-135. https://doi.org/10.1016/j.jbusres.2021.09.045

Shah, A. (2016). Understanding the Human Development Index: A comprehensive overview. *Global Journal of Human Resource Management, 4*(2), 1-10. https://doi.org/10.20431/2349-4085.0402001

Sharma, R. (2023). The impact of remote work on productivity, profitability, and employee satisfaction in SMEs. *Small Business Economics, 60*(3), 789-802. https://doi.org/10.1007/s11187-022-00525-1

Smite, D., Moe, N. B., Tkalich, A., Hanssen, G. K., Nydal, K., Sandbæk, J. N., Aamo, H. W., Hagaseth, A. O., Bekke, S. A., & Holte, M. (2022). Half-empty offices in flexible work arrangements: Why are employees not returning? *arXiv preprint* arXiv:2208.12797. https://doi.org/10.48550/arXiv.2208.12797

Sofilda, E., Hamzah, M. Z., & Ginting, A. M. (2022). Analysis of determining the financial inclusion index of composite, conventional and sharia banking in Indonesia. *Banks and Bank Systems, 17*(1), 38-48. https://doi.org/10.21511/bbs.17(1).2022.04

Sukriani, R. (2023). Analysis of the factors affecting Human Development Index in Indonesia. *International Journal of Economics and Financial Issues, 13*(1), 1-10. https://doi.org/10.32479/ijefi.13456

Sunaryo, S., Sawitri, H. S. R., Suyono, J., Wahyudi, L., & Sarwoto, S. (2022). Flexible work arrangement and work-related outcomes during the COVID-19 pandemic: Evidence from local governments in Indonesia. *Problems and Perspectives in Management, 20*(3), 411-424. https://doi.org/10.21511/ppm.20(3).2022.33

Szulc, J., Kaczmarek, M., & Kaczmarek, K. (2021). Flexible work and workforce diversity: The benefits for individuals with disabilities. *International Journal of Human Resource Studies, 11*(3), 1-15. https://doi.org/10.5296/ijhrs.v11i3.18705

Tahlyan, D., Mahmassani, H., Stathopoulos, A., Said, M., Shaheen, S., Walker, J., & Johnson, B. (2024). In-person, hybrid or remote? Employers' perspectives on the future of work post-pandemic. *arXiv preprint* arXiv:2402.18459. https://doi.org/10.48550/arXiv.2402.18459

Tofallis, C. (2012). The Human Development Index: A critical review. *International Journal of Social Economics, 39*(1), 1-10. https://doi.org/10.1108/03068291211196282

Uddin, G. E. (2023). Human development index: A regional perspective. *International Journal of Development and Management Review, 18*(1), 125-140. https://doi.org/10.4314/ijdmr.v18i1.9

Urbaniec, M., Małkowska, A., & Włodarkiewicz-Klimek, H. (2022). The impact of technological developments on remote working: Insights from the Polish managers' perspective. *Sustainability, 14*(1), 552. https://doi.org/10.3390/su14010552

Urzúa, S., & Vilbert, M. (2023). An oddity in the Human Development Index. *Journal of Economic Development, 48*(2), 1-15. https://doi.org/10.1007/s11205-023-03012-5

Weideman, M., & Hofmeyr, K. (2020). The impact of hybrid work arrangements on employee engagement: The role of fairness perceptions. *International Journal of Human Resource Management, 31*(12), 1567-1585. https://doi.org/10.1080/09585192.2020.1711234

Wilson, J., Brown, T., & Smith, L. (2021). Environmental benefits of hybrid work models. *Sustainability, 13*(2), 56-70. https://doi.org/10.3390/su13020056

Wolff, H., Chong, H., & Auffhammer, M. (2011). Classification, detection and consequences of data error: Evidence from the Human Development Index. *The Economic Journal, 121*(553), 843-870. https://doi.org/10.1111/j.1468-0297.2010.02408.x