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RESEARCH PAPER

Economic Recession Hit-Back Leading to Unemployment Despite Being in Digital and Information Ages

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ABSTRACT

Despite living in an era characterized by technological advancements and unprecedented access to information, economic recessions continue to exert a profound impact on employment rates. This study aims to analyze the underlying factors contributing to this enigma, exploring the interaction between economic recessions, technological progress, and the labor market. By examining the effects of the recession on various sectors, such as small and medium-sized enterprises (SMEs) and entrepreneurs, we uncover the intricate relationship between technological innovation, employment, and economic stability. The information and digital eras have produced huge technological advancements that have fundamentally changed how we live and work. Nonetheless, despite this advancement, economic downturns continue to occur, having a significant influence on individuals, companies, and entire civilizations. This study looks at 20 countries' GDPs, minimum wages, and unemployment rates to see how the global economic slump has impacted them despite their investments in new technologies and inventions. The countries studied include two from Africa and five from Asia. Additionally, this study discusses the how the persistent decline in economic activities disrupted the GDPs of various countries, rate of unemployment spread of misinformation and algorithmic decision-making and their potential implications for job security. Furthermore, it highlights the importance of targeted support for SMEs, investment in regulation of digital platforms, promotion of digital literacy, and international collaboration to foster economic resilience and ensure a more equitable distribution of opportunities in the face of economic uncertainties. The report also looks at the effects of economic downturns in the digital era and the reasons why they continue despite technological advancements. In its final section, it offers suggestions for potential courses of action to mitigate the consequences of economic downturns while emphasising some of the historically successful strategies. To successfully go through the uncertainties of the twenty-first century, business executives, governments, and society at large may need to have a thorough understanding of the causes of economic recessions and how to deal with them.

Keywords: Economic Recession, GDP, Minimum Wages, Unemployment Rate, Information and Digital Age.

INTRODUCTION

Technology has advanced dramatically since the beginning of the digital era, changing how people live and work. Due to the increasing usage of technology that has improved manufacturing and efficiency, businesses can now reach more consumers and compete globally. However, the global economy is still prone to repeated recessions despite these developments. Economic recessions are characterised by a decline in the gross domestic product and employment, two measures of economic activity. Every aspect of the economy is impacted by recessions, including consumers, businesses, and governments (Yunanto et al., 2023). Market meltdowns, financial crises, and international crises are just a few examples of the many various shapes and sizes that recessions can take. In today's fast-paced and interconnected world, we find ourselves in the midst of the digital and information ages. With technological advancements and the proliferation of digital platforms, one would expect that unemployment rates would decrease as new opportunities emerge. However, a closer look reveals a paradoxical situation. Despite living in an era of innovation and endless possibilities, economic recessions continue to pose significant challenges, leading to high unemployment rates. The global financial crisis of 2008, which triggered a severe economic downturn, highlighted the vulnerability of economies worldwide (Yunanto et al., 2023).. Many countries struggled to recover, and the repercussions of the crisis are still felt in various sectors. While the digital and information ages have undoubtedly brought about numerous advancements, they have not shielded societies from the adverse effects of economic recessions.

This study aims to delve into the intricate relationship between economic recessions, unemployment, and the digital and information ages. It seeks to understand why, despite living in a time of unprecedented connectivity and access to information, unemployment rates persist or even rise during economic recessions (Ahuru, 2022). One possible explanation is the disruption caused by economic recessions. When businesses face financial constraints, they often resort to cost-cutting measures, including layoffs and hiring freezes. This leads to a surge in unemployment, as individuals lose their jobs, and new employment opportunities become scarce. The digital and information ages, while offering new avenues for work, cannot fully compensate for the job losses resulting from economic recessions (Gwyn & Gerry, 2023). Moreover, the digital and information ages have brought about their own unique challenges. Technological advancements have automated many routine tasks, leading to a shift in the job market's demand for skills. Workers who lack the necessary digital literacy and skills find themselves at a disadvantage, struggling to secure employment in an increasingly competitive landscape. Thus, the digital divide exacerbates the impact of economic recessions and contributes to higher unemployment rates.

Furthermore, the study will explore how economic policies, both at the national and international levels, impact unemployment rates during economic downturns. Governments often implement fiscal and monetary measures to stimulate economic growth and mitigate the effects of recessions (Ahuru, 2022). Understanding the effectiveness of these policies in reducing unemployment in the digital and information ages is crucial for policymakers and economists alike (Molina-betancur et al., 2023). In a nut shell, despite living in the digital and information ages, economic recessions continue to inflict severe blows to employment rates. This study aims

to shed light on the underlying causes of this phenomenon, examining the role of technological advancements, digital literacy, and economic policies (Burtnett, 2023). By deepening our understanding of these dynamics, we can develop strategies and interventions to mitigate the adverse effects of economic downturns and create a more resilient and inclusive economy for all.

The failure to address the basic economic problems that lead to instability has been demonstrated by repeated recessions despite the developments in the information and digital era (Gwyn & Gerry, 2023). Because concerns regarding the role of technology in providing solutions for economic issues have been raised, it is now vital to examine the fundamental causes of economic downturns and how they can be remedied through the use of technology. Given the impact of economic recessions on various economic sectors and the rising use of technology, it is imperative to comprehend why economic downturns continue to occur in the digital age and how technology might be used to mitigate their effects (Carreri & Teso, 2006; Gwyn & Gerry, 2023; Molina-betancur et al., 2023). In order to understand the connection between economic recessions and unemployment, this study investigates why economic recessions persist despite technological advancements and suggests remedies for handling them in the information and digital era.

LITERATURE REVIEW

When the economy is having trouble unemployment frequently increases. This is because there will be less economic activity during a recession, and businesses may reduce their workforce or fire workers as a result. People may also reduce their spending during a recession, which could lead to additional job losses, lower output levels, and higher unemployment rates. Research by Casal, Rivera, and Costa-Storti, for instance, in 2023, will examine how the economic crisis affects unemployment despite the fact that little research has been done in this area. This study aims to determine whether the recession has an impact on young people's drug use. "Is there an economic recession during COVID-19 in the United States from the perspective of the employment factor?" The COVID-19 pandemic in the US, which had a considerable impact on numerous organisations and enterprises, was validated by this study. The effect of monetary policy shocks on racial unemployment rates in the US was also studied by Bennani (2023). Ahn (2023) studied the Trend Unemployment Rate as well as the Duration Structure of Unemployment Hazards.

How much unemployment changes can depend on a variety of factors, including the length and severity of the recession, the size of the workforce, and the industries that are most affected. Some sources claim that the US unemployment rate reached its highest point during the Great Recession of 2007–2009, and that various industries were affected in different ways (Tobing 2023). It is important to keep in mind that there might be a complex relationship between economic crises and unemployment that differs depending on a range of economic, technological, and social factors. Some people commit suicide as a result of hardships caused by a variety of economic, environmental, and genetic factors (Duleba, Gonda, Rihmer, & Dome, 2012; Mathieu, Treloar, Hawgood, Ross, & Kolves, 2022).

Once more, job losses during a recession can affect both skilled and unskilled workers and can occur in a range of industries (Burtnett, 2023). A recession's effects on job loss can be particularly severe for persons who work in less stable or cyclical industries, such as manufacturing, construction, and retail. The degree of the job loss might vary greatly depending on the duration and extent of the recession, the velocity of recovery, and the steps taken by the government and businesses to reduce the impact (Gwyn & Gerry, 2023). According to studies (Byaro et al., 2023; Casal et al., 2023), prolonged job loss can have a negative impact on people's mental and physical health. Additionally, there may be a link between the economic crisis and unemployment rates (Khan, A., & Ximei, W. 2022).

According to Gwyn & Gerry (2023) and Yunanto et al. (2023), the effects of economic recession on unemployment can differ by age group, industry, and location. Despite advancements in digital and information technologies, some industries that rely heavily on physical labour or face-to-face interactions may still suffer from recessions (Ahuru, 2022). For instance, a decline in demand may have an impact on the hotel and retail industries, leading to job losses and an increase in the unemployment rate. At the same time, automation and digitalization may negatively affect specific sectors of the economy and professions, which may lead to job losses and other economic problems. Since the labour market is constantly evolving, it's imperative to consider alternative solutions for facilitating the shift to a digital economy, promoting education and skill development, and encouraging innovation and entrepreneurship (Ogbonna et al., 2022). Additionally, effective job creation and economic growth support must be prioritised by decision-makers, as well as measures to assist individuals who may be more vulnerable to the effects of the economic downturn on employment, such as low-income workers, women, and minorities (Gwyn & Gerry, 2022).

METHODOLOGY

Based on World of Statistics Reports (July 2023), this study seeks to show the effects of the worldwide recession on unemployment. These studies concentrate on the nominal GDP in trillions of US dollars of 20 chosen nations, the nominal minimum wages in US dollars, and the related percentage rates of unemployment. This study initially explores a number of studies on the effects of economic recessions on job losses before moving on to examine the influence of ICT on unemployment as a result of economic recessions. The World of Statistics page on Twitter provided a report on the GDPs per capita of the 20 countries that were chosen in 2023 at 4:56 p.m. on July 16, 2023. This study gathered pertinent literature to support the various secondary data that was taken from that report. Second, on July 9, 2023, at 2:26 PM, the World of Statistics produced a report on the rate of global minimum wages of 20 chosen countries. On July 9, 2023, 2:26 PM, the World of Statistics also produced a report on the rate of global youth unemployment in addition to one on the unemployment rates of 20 chosen countries. Finally, the data was evaluated in light of the findings and previous research.

SN	Country	GDP ($) in Trillion	Minimum Wages ($)	Rate of Unemployment (%)
1	Canada	2.08	1545	11.5

2	USA	26.85	1550	7.5
3	Germany	4.3	1594	6.1
4	Australia	1.7	2022	7.6
5	France	2.92	1380	16.9
6	Turkey	1.02	457	19.1
7	Nigeria	0.506	65	53.4
8	South Korea	1.72	1333	5.9
9	Netherlands	1.08	1895	8.2
10	Spain	1.49	925	28.4
11	Taiwan	0.79	800	11.5
12	Poland	0.748	584	10.3
13	Belgium	0.624	1509	14.6
14	Ireland	0.594	1753	7.4
15	Hong Kong	0.382	959	5.0
16	South Africa	0.399	226	62.1
17	Vietnam	0.449	162	7.41
18	Thailand	0.574	195	6.5
19	Portugal	0.267	690	18.3
20	Romania	0.348	393	21.7

Table 1. The GDP, Minimum wages, and the rate of unemployment of 20 countries per capita in 2023. Source: World of Statistic (July 2020)

FINDINGS

The global economy was predicted to undergo a transformation with the arrival of the digital and information ages, resulting in higher productivity, the creation of jobs, and overall growth. The difficulties brought about by the economic recession, which has led to chronically high unemployment rates, low minimum wage levels, and sluggish GDP development, have been examined in a number of linked works, nevertheless. This succinct discussion seeks to summarise some of the important works that illuminate these challenges, while also examining the underlying reasons and weighing the effects.

On the other hand, some studies have explored how the digital and information ages have also created new job opportunities. The growth of industries such as e-commerce, software development, data analysis, and digital marketing has resulted in the creation of new employment avenues (Waugh et al., 2020). However, it is important to note that the overall impact of these job creations may vary across different regions and industries. Scholars have also

examined the role of government policies and interventions in mitigating the impact of economic recessions on unemployment (Antes, 2023). These studies highlight the importance of targeted initiatives such as skills development programs, retraining schemes, and entrepreneurship support to address unemployment challenges in the digital and information ages.

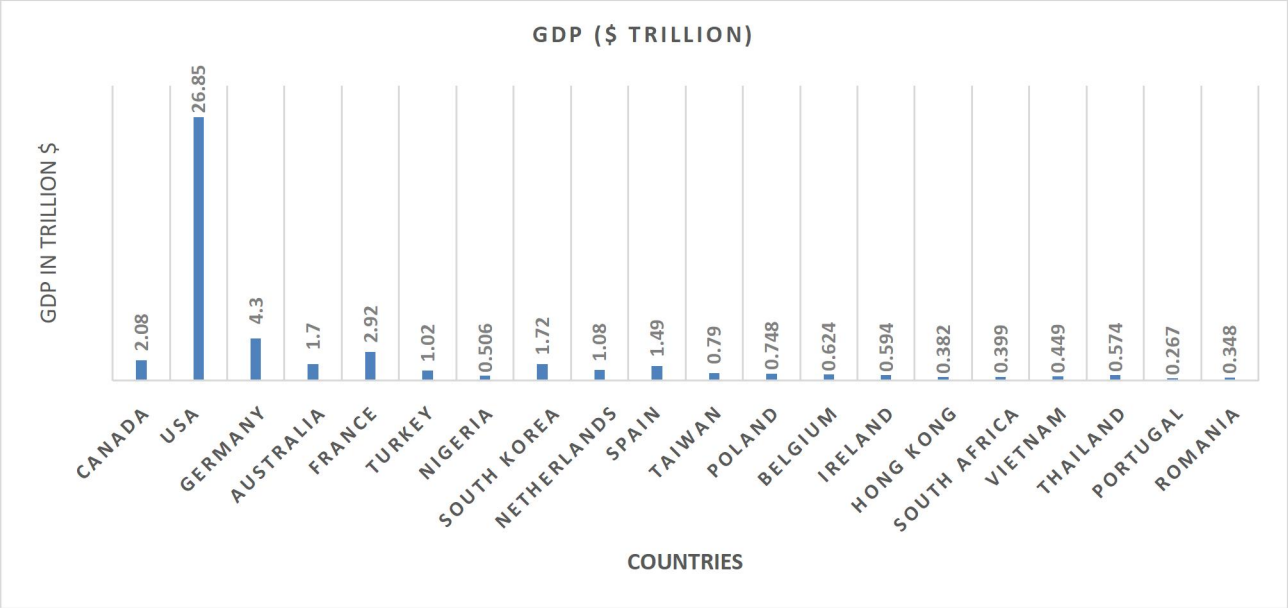

Figure 1. The GDP of the 20 countries in $ in Trillion, Source: World of Statistics (July 2023)

According to Table 1 and its associated Figure 1, the USA has the greatest GDP among the 20 countries that were chosen, with a value of 26.85, which is incomparable to those with the lowest GDPs, like Portugal and Romania. Additionally, the $1500 average pay is equivalent to $1550 and 7.5%. This demonstrates that greater wages are not a given in nations with the largest GDPs. The USA has the largest GDP, as indicated in Table 1 and Figure 2, but it is unable to compete with Australia in terms of salaries due to Australia's higher minimum salary of $2022 and lower unemployment rate of 7.6% of the total population. In a similar vein, a nation's ability to effectively manage its GDP and minimum wages will determine how high its unemployment rate is. Considering that low minimum salaries are always a sign of a lack of competitiveness in the technology and other resources.

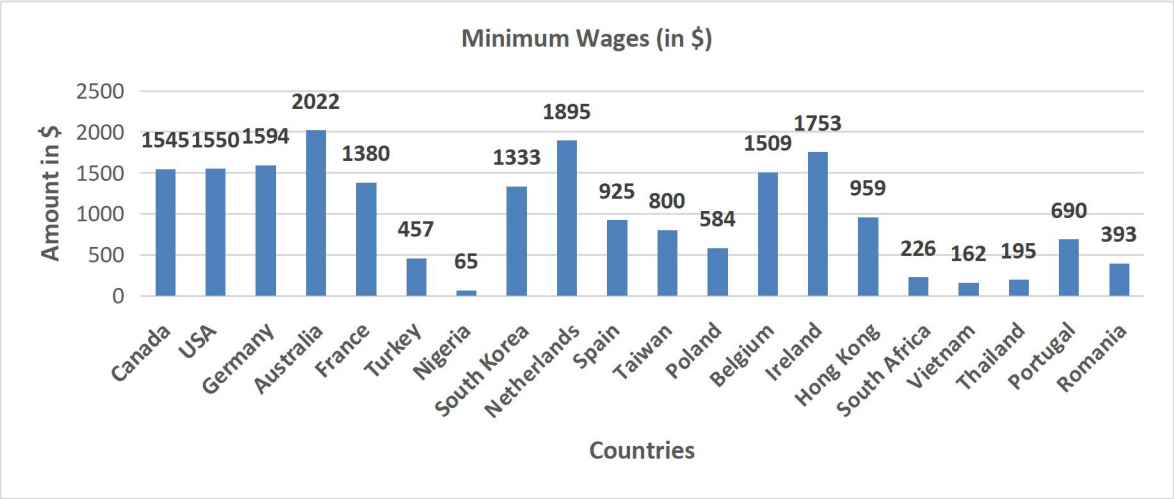

Figure 2. The minimum wages in 20 selected countries, Source: World of Statistics (July 2023)

The development of information and digital technology has had a significant impact on both the job market and the world economy. In particular, technology has prompted disruptions and transformations in numerous established industries while also opening up new prospects for innovation, entrepreneurship, and job creation (Postua et al., 2021). Several studies have examined the relationship between economic recessions and unemployment rates such as the studies by (Byaro et al., 2023 & Casal et al., 2023). These studies highlight how recessions can lead to job losses across various sectors, including those within the digital and information industries. The decline in economic activity often results in reduced demand for goods and services, leading to layoffs and higher unemployment rates (Byaro et al., 2023). While the digital and information ages have brought about significant technological advancements, they have also caused shifts in the labor market. Automation and digitization have led to the displacement of certain job roles, creating a mismatch between the skills available in the workforce and the demands of the evolving job market (Ogbonna et al., 2022). This mismatch can contribute to unemployment, particularly during economic downturns.

Economic recessions can disproportionately affect certain regions, exacerbating regional disparities in employment. The digital and information ages have seen the concentration of economic opportunities in certain urban areas, leading to uneven distribution of jobs (Gwyn & Gerry, 2023). Regions heavily dependent on industries vulnerable to recessions, such as manufacturing or traditional retail, may experience higher unemployment rates despite the presence of digital and information sectors (Papapetrou & Tsalaporta, 2021). The digital age has also facilitated the rise of entrepreneurship and startups. During economic recessions, individuals may turn to entrepreneurship as a response to limited job opportunities. While startups can contribute to job creation, they also face higher risks during economic downturns, as funding and consumer demand may decrease. Understanding the dynamics of startup ecosystems and their resilience in the face of recession can provide insights into employment trends in the digital and

information ages (Ahuru, 2022). The digital and information ages have brought about significant advancements, but not all individuals have equal access to digital technologies and opportunities. The digital divide, characterized by disparities in internet access, digital skills, and technology adoption, can exacerbate inequalities in employment. Those who lack digital literacy or access to online job platforms may face greater challenges in finding employment during economic recessions.

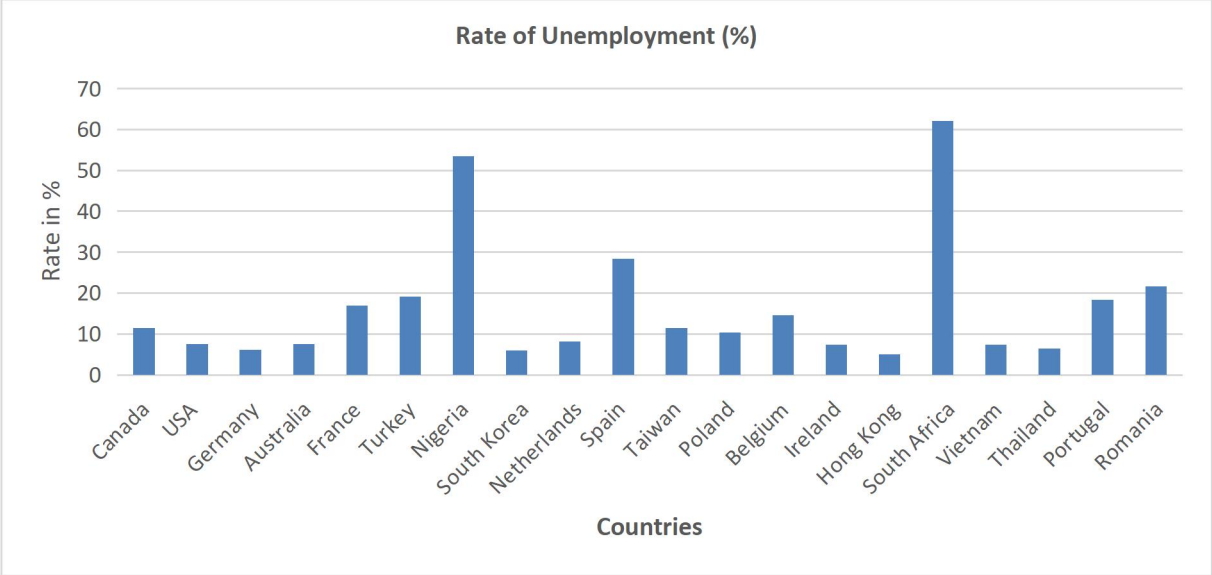

Figure 3. The rate of unemployment in 20 selected countries, Source: World of Statistics (July 2023)

The two African nations of Nigeria and South Africa, with respective unemployed rates of 53.4% and 62.1% of their entire populations, have the greatest rates of unemployment, according to data in Table 1 and Figure 3. And the low GDP and low minimum wage amounts—$506 billion and $65; $399 billion and $226 as seen above have something to do with this. Digitalization's effects on the labour market can be intricate and multidimensional. On the one hand, digitalization has the potential to generate new jobs in industries like internet marketing, data analytics, and software development (Ahuru, 2022). During periods of digital disruption, there may be a greater need for specific education and training because these industries require new skills and knowledge. The lowest unemployment rates are found in South Korea and Hong Kong, which highlights the two countries' strong economic importance. This shows that these two countries properly manage the economic and technological growth in their respective areas, which results in low unemployed rates.

The digital and information ages have brought about rapid technological advancements, leading to a growing demand for workers with specialized skills. However, there is often a mismatch between the skills possessed by job seekers and the skills required by employers in the digital economy (Gwyn & Gerry, 2023). This skills gap can contribute to higher unemployment rates, especially during economic recessions when employers may be more selective in their

hiring. The digital age has also given rise to the gig economy, characterized by short-term contracts and freelance work facilitated by digital platforms (Topal, 2018). While this flexible work arrangement has provided opportunities for income generation, it can also lead to increased job insecurity and lower job stability during economic downturns. Workers in the gig economy may be more vulnerable to unemployment as they often lack the same protections and benefits as traditional employees.

Discussion of Findings

Despite the fact that it is quite rare to hear that digitalization leads to job displacement and unemployment, particularly in businesses that are substantially automated (Antes, 2023; Gwyn & Gerry, 2023), For instance, automation and robotics have significantly reduced the number of jobs in the industrial sector. The growth of e-commerce and online purchasing has also harmed traditional retail businesses, resulting in the closure of numerous brick-and-mortar stores and the elimination of retail jobs (Ahuru, 2022; Oye & Sciences, 2011). The growth of the gig economy, which has given independent contractors and freelancers new chances to find work through online marketplaces like Uber, Fiverr, and Upwork, is another component of the digitization of the economy (Waugh et al., 2020). However, the world of gig economy has also come under fire for lacking job security, benefits, and labour protections, raising questions about the standard of employment and long-term financial security for those employed in this field.

The winner-take-all dynamics that have emerged in the digital economy, where a small percentage of people and businesses amass enormous riches while the majority struggles with low-paying jobs and limited economic options, are examined by Gwyn and Gerry (2023). Similar to this, the Ahuru (2022) work explores the wider effects of technology development and automation on employment. Although technology has advanced quickly and there is more connectedness than ever before, the author contends that these innovations have also led to a reduction in the need for human employment. According to Papapetrou and Tsalaporta (2021), the low national GDP was caused by a decline in average earnings across industries. If a pay decline happens at the mean, this indicates that wage evolution in different economic sectors during the crisis differed. According to earlier research, workers at the top of the conditional wage distribution do not capture a disproportionate share of the salaries that have remained in the Greek economy throughout the same time period. According to Hean and Deng (2023), minimum wages had a serious detrimental effect on employment prior to the recession. The effects of minimum wages on unemployment during the recession were minimal.

This study also demonstrates that there are some promising and workable solutions to the problem of unemployment in a downturn in the economy: Policymakers can invest in education and training programmes to assist people develop the skills required for jobs of the future, particularly those that are in high demand in the digital economy, by investing in innovation and training (Mungodla et al. 2019). Long-term, this can lower unemployment and boost economic growth. Plans for employment retention: During economic downturns, governments might put in place plans for job retention that give firms subsidies to keep employees employed rather than fire them. In the medium term, up until the economy recovers, this can aid in maintaining employment levels (Gwyn & Gerry, 2023). Extension of emergency unemployment benefits: To

assist unemployed people during periods of economic recession, governments may want to explore extending and expanding emergency unemployment benefits. In a nutshell, there is not an instant solution for the sophisticated and varied issue of unemployment during a downturn in the economy (Topal, 2018). In order to mitigate the effects of the recession on employment and encourage long-term economic growth, these and other viable methods might be combined.

CONCLUSION

This study examines how different countries' GDP growth is impacted by economic recessions. The authors emphasise the connections among the 20 countries' GDP, minimum wages, and unemployment rates. The study also sheds light on how economic recession, slow GDP growth, and fast GDP growth in various nations relate to one another. The global economic recession had a huge influence and resulted in a rise in unemployment because there were less work prospects. The labour market had a difficult time adjusting to remote working and the technical improvements of this era even though we were living in the digital information age. To lower unemployment rates, a mentality change and rapid acceptance of technology are now required. This study demonstrates that, despite the fact that economic digitalization has unquestionably increased opportunities for employment, it has also resulted in major displacements of employment and disruptions in a number of conventional industries. This emphasises the necessity of effective policies to promote employment, education, and training in the digital era and to make sure that the advantages of digitization are distributed more widely across various industries and individuals with all levels of competence.

The global economic recession had a huge influence and resulted in a rise in unemployment because there were less work prospects. The labour market had a difficult time adjusting to remote working and the technical improvements of this era even though we were living in the digital information age. In order to decrease unemployment rates, a mentality change and rapid acceptance of technology are now required. The study also looks at how the economic downturn has affected unemployment in various nations and areas. The authors examine variables such governmental policies, labour market dynamics, and social welfare systems as they compare unemployment rates during recessions across various economies. The goal of the research is to find trends and elements that can aid in reducing the detrimental effects of economic recessions on unemployment. Despite living in the digital and information age, economic recessions can still lead to high unemployment rates. The pandemic has exposed vulnerabilities in various sectors, particularly SMEs and entrepreneurs. Moreover, the spread of misinformation and the challenges posed by algorithms in terms of transparency and oversight are ongoing issues that need to be addressed. The COVID-19 pandemic and subsequent economic recession have had a significant impact on various aspects of society, including unemployment rates. Measures taken to contain the virus, such as lockdowns and restrictions, have particularly affected small and medium-sized enterprises (SMEs) and entrepreneurs, leading to higher unemployment levels and an increase in the number of people seeking financial aid. Additionally, the pandemic has also had negative effects on mental health, especially among children and adolescents. The impact of digital platforms on choice and quality for news consumers has been a subject of analysis and discussion. Governments have taken steps to

combat fake news and disinformation, including the establishment of agencies to monitor online news and the introduction of legislation to penalize the dissemination of fake news. The manipulation of information can have significant consequences, influencing public perceptions and affecting election campaigns.

Recommendations

According to this report, the government ought to invest funds on technology and train unemployed people in new skills to increase their chances of securing distant employment. Companies should use remote work rules to lower operating costs and boost productivity. For businesses that embrace a remote working model, the government should offer tax benefits in order to foster an atmosphere that supports entrepreneurship and self-employment. People should be creative and look for opportunities for self-employment that fit with the contemporary digital era. This study makes the case for more research that other nations, particularly those in Africa, should be included in order to compare their levels of technological penetration in various economic sectors.

- Governments and policymakers should provide targeted support and financial assistance to SMEs and entrepreneurs to help them recover from the economic impact of the recession. This could include measures such as grants, tax incentives, and access to affordable loans.
- Given the negative impact of the pandemic on mental health, it is crucial to prioritize and invest in mental health services, especially for children and adolescents. This can include increasing access to mental health professionals, promoting mental health awareness, and implementing innovative policies and programs.
- Governments should continue to evaluate and regulate digital platforms to ensure transparency, choice, and quality of information for news consumers. Efforts to combat fake news and disinformation should be strengthened, and agencies responsible for monitoring online news should have the necessary resources and authority.
- Educating the public, especially young people, about critical thinking skills and digital literacy is essential in navigating the digital age. This can help individuals better discern and evaluate the information they encounter online, reducing the impact of misinformation.
- Policymakers should coordinate efforts and share best practices across countries to mitigate the impact of economic recessions. This can include sharing information on successful strategies for job creation, economic recovery, and support for affected industries.

Overall, addressing the impact of economic recessions on unemployment in the digital and information age requires a multi-faceted approach that combines financial support, mental health services, regulation of digital platforms, promotion of critical thinking, and international collaboration.

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ABSTRACT

Despite living in an era characterized by technological advancements and unprecedented access to information, economic recessions continue to exert a profound impact on employment rates. This study aims to analyze the underlying factors contributing to this enigma, exploring the interaction between economic recessions, technological progress, and the labor market. By examining the effects of the recession on various sectors, such as small and medium-sized enterprises (SMEs) and entrepreneurs, we uncover the intricate relationship between technological innovation, employment, and economic stability. The information and digital eras have produced huge technological advancements that have fundamentally changed how we live and work. Nonetheless, despite this advancement, economic downturns continue to occur, having a significant influence on individuals, companies, and entire civilizations. This study looks at 20 countries' GDPs, minimum wages, and unemployment rates to see how the global economic slump has impacted them despite their investments in new technologies and inventions. The countries studied include two from Africa and five from Asia. Additionally, this study discusses the how the persistent decline in economic activities disrupted the GDPs of various countries, rate of unemployment spread of misinformation and algorithmic decision-making and their potential implications for job security. Furthermore, it highlights the importance of targeted support for SMEs, investment in regulation of digital platforms, promotion of digital literacy, and international collaboration to foster economic resilience and ensure a more equitable distribution of opportunities in the face of economic uncertainties. The report also looks at the effects of economic downturns in the digital era and the reasons why they continue despite technological advancements. In its final section, it offers suggestions for potential courses of action to mitigate the consequences of economic downturns while emphasising some of the historically successful strategies. To successfully go through the uncertainties of the twenty-first century, business executives, governments, and society at large may need to have a thorough understanding of the causes of economic recessions and how to deal with them.

Keywords: Economic Recession, GDP, Minimum Wages, Unemployment Rate, Information and Digital Age.

INTRODUCTION

Technology has advanced dramatically since the beginning of the digital era, changing how people live and work. Due to the increasing usage of technology that has improved manufacturing and efficiency, businesses can now reach more consumers and compete globally. However, the global economy is still prone to repeated recessions despite these developments. Economic recessions are characterised by a decline in the gross domestic product and employment, two measures of economic activity. Every aspect of the economy is impacted by recessions, including consumers, businesses, and governments (Yunanto et al., 2023). Market meltdowns, financial crises, and international crises are just a few examples of the many various shapes and sizes that recessions can take. In today's fast-paced and interconnected world, we find ourselves in the midst of the digital and information ages. With technological advancements and the proliferation of digital platforms, one would expect that unemployment rates would decrease as new opportunities emerge. However, a closer look reveals a paradoxical situation. Despite living in an era of innovation and endless possibilities, economic recessions continue to pose significant challenges, leading to high unemployment rates. The global financial crisis of 2008, which triggered a severe economic downturn, highlighted the vulnerability of economies worldwide (Yunanto et al., 2023).. Many countries struggled to recover, and the repercussions of the crisis are still felt in various sectors. While the digital and information ages have undoubtedly brought about numerous advancements, they have not shielded societies from the adverse effects of economic recessions.

This study aims to delve into the intricate relationship between economic recessions, unemployment, and the digital and information ages. It seeks to understand why, despite living in a time of unprecedented connectivity and access to information, unemployment rates persist or even rise during economic recessions (Ahuru, 2022). One possible explanation is the disruption caused by economic recessions. When businesses face financial constraints, they often resort to cost-cutting measures, including layoffs and hiring freezes. This leads to a surge in unemployment, as individuals lose their jobs, and new employment opportunities become scarce. The digital and information ages, while offering new avenues for work, cannot fully compensate for the job losses resulting from economic recessions (Gwyn & Gerry, 2023). Moreover, the digital and information ages have brought about their own unique challenges. Technological advancements have automated many routine tasks, leading to a shift in the job market's demand for skills. Workers who lack the necessary digital literacy and skills find themselves at a disadvantage, struggling to secure employment in an increasingly competitive landscape. Thus, the digital divide exacerbates the impact of economic recessions and contributes to higher unemployment rates.

Furthermore, the study will explore how economic policies, both at the national and international levels, impact unemployment rates during economic downturns. Governments often implement fiscal and monetary measures to stimulate economic growth and mitigate the effects of recessions (Ahuru, 2022). Understanding the effectiveness of these policies in reducing unemployment in the digital and information ages is crucial for policymakers and economists alike (Molina-betancur et al., 2023). In a nut shell, despite living in the digital and information ages, economic recessions continue to inflict severe blows to employment rates. This study aims to shed light on the underlying causes of this phenomenon, examining the role of technological advancements, digital literacy, and economic policies (Burtnett, 2023). By deepening our

understanding of these dynamics, we can develop strategies and interventions to mitigate the adverse effects of economic downturns and create a more resilient and inclusive economy for all.

The failure to address the basic economic problems that lead to instability has been demonstrated by repeated recessions despite the developments in the information and digital era (Gwyn & Gerry, 2023). Because concerns regarding the role of technology in providing solutions for economic issues have been raised, it is now vital to examine the fundamental causes of economic downturns and how they can be remedied through the use of technology. Given the impact of economic recessions on various economic sectors and the rising use of technology, it is imperative to comprehend why economic downturns continue to occur in the digital age and how technology might be used to mitigate their effects (Carreri & Teso, 2006; Gwyn & Gerry, 2023; Molina-betancur et al., 2023). In order to understand the connection between economic recessions and unemployment, this study investigates why economic recessions persist despite technological advancements and suggests remedies for handling them in the information and digital era.

LITERATURE REVIEW

When the economy is having trouble unemployment frequently increases. This is because there will be less economic activity during a recession, and businesses may reduce their workforce or fire workers as a result. People may also reduce their spending during a recession, which could lead to additional job losses, lower output levels, and higher unemployment rates. Research by Casal, Rivera, and Costa-Storti, for instance, in 2023, will examine how the economic crisis affects unemployment despite the fact that little research has been done in this area. This study aims to determine whether the recession has an impact on young people's drug use. "Is there an economic recession during COVID-19 in the United States from the perspective of the employment factor?" The COVID-19 pandemic in the US, which had a considerable impact on numerous organisations and enterprises, was validated by this study. The effect of monetary policy shocks on racial unemployment rates in the US was also studied by Bennani (2023). Ahn (2023) studied the Trend Unemployment Rate as well as the Duration Structure of Unemployment Hazards.

How much unemployment changes can depend on a variety of factors, including the length and severity of the recession, the size of the workforce, and the industries that are most affected. Some sources claim that the US unemployment rate reached its highest point during the Great Recession of 2007–2009, and that various industries were affected in different ways (Tobing 2023). It is important to keep in mind that there might be a complex relationship between economic crises and unemployment that differs depending on a range of economic, technological, and social factors. Some people commit suicide as a result of hardships caused by a variety of economic, environmental, and genetic factors (Duleba, Gonda, Rihmer, & Dome, 2012; Mathieu, Treloar, Hawgood, Ross, & Kolves, 2022).

Once more, job losses during a recession can affect both skilled and unskilled workers and can occur in a range of industries (Burtnett, 2023). A recession's effects on job loss can be particularly severe for persons who work in less stable or cyclical industries, such as manufacturing, construction, and retail. The degree of the job loss might vary greatly depending on the duration and extent of the recession, the velocity of recovery, and the steps taken by the

government and businesses to reduce the impact (Gwyn & Gerry, 2023). According to studies (Byaro et al., 2023; Casal et al., 2023), prolonged job loss can have a negative impact on people's mental and physical health. Additionally, there may be a link between the economic crisis and unemployment rates (Khan, A., & Ximei, W. 2022).

According to Gwyn & Gerry (2023) and Yunanto et al. (2023), the effects of economic recession on unemployment can differ by age group, industry, and location. Despite advancements in digital and information technologies, some industries that rely heavily on physical labour or face-to-face interactions may still suffer from recessions (Ahuru, 2022). For instance, a decline in demand may have an impact on the hotel and retail industries, leading to job losses and an increase in the unemployment rate. At the same time, automation and digitalization may negatively affect specific sectors of the economy and professions, which may lead to job losses and other economic problems. Since the labour market is constantly evolving, it's imperative to consider alternative solutions for facilitating the shift to a digital economy, promoting education and skill development, and encouraging innovation and entrepreneurship (Ogbonna et al., 2022). Additionally, effective job creation and economic growth support must be prioritised by decision-makers, as well as measures to assist individuals who may be more vulnerable to the effects of the economic downturn on employment, such as low-income workers, women, and minorities (Gwyn & Gerry, 2022).

METHODOLOGY

Based on World of Statistics Reports (July 2023), this study seeks to show the effects of the worldwide recession on unemployment. These studies concentrate on the nominal GDP in trillions of US dollars of 20 chosen nations, the nominal minimum wages in US dollars, and the related percentage rates of unemployment. This study initially explores a number of studies on the effects of economic recessions on job losses before moving on to examine the influence of ICT on unemployment as a result of economic recessions. The World of Statistics page on Twitter provided a report on the GDPs per capita of the 20 countries that were chosen in 2023 at 4:56 p.m. on July 16, 2023. This study gathered pertinent literature to support the various secondary data that was taken from that report. Second, on July 9, 2023, at 2:26 PM, the World of Statistics produced a report on the rate of global minimum wages of 20 chosen countries. On July 9, 2023, 2:26 PM, the World of Statistics also produced a report on the rate of global youth unemployment in addition to one on the unemployment rates of 20 chosen countries. Finally, the data was evaluated in light of the findings and previous research.

SN	Country	GDP ($) in Trillion	Minimum Wages ($)	Rate of Unemployment (%)
1	Canada	2.08	1545	11.5
2	USA	26.85	1550	7.5
3	Germany	4.3	1594	6.1
4	Australia	1.7	2022	7.6

5	France	2.92	1380	16.9
6	Turkey	1.02	457	19.1
7	Nigeria	0.506	65	53.4
8	South Korea	1.72	1333	5.9
9	Netherlands	1.08	1895	8.2
10	Spain	1.49	925	28.4
11	Taiwan	0.79	800	11.5
12	Poland	0.748	584	10.3
13	Belgium	0.624	1509	14.6
14	Ireland	0.594	1753	7.4
15	Hong Kong	0.382	959	5.0
16	South Africa	0.399	226	62.1
17	Vietnam	0.449	162	7.41
18	Thailand	0.574	195	6.5
19	Portugal	0.267	690	18.3
20	Romania	0.348	393	21.7

Table 1. The GDP, Minimum wages, and the rate of unemployment of 20 countries per capita in 2023. Source: World of Statistic (July 2020)

FINDINGS

The global economy was predicted to undergo a transformation with the arrival of the digital and information ages, resulting in higher productivity, the creation of jobs, and overall growth. The difficulties brought about by the economic recession, which has led to chronically high unemployment rates, low minimum wage levels, and sluggish GDP development, have been examined in a number of linked works, nevertheless. This succinct discussion seeks to summarise some of the important works that illuminate these challenges, while also examining the underlying reasons and weighing the effects.

On the other hand, some studies have explored how the digital and information ages have also created new job opportunities. The growth of industries such as e-commerce, software development, data analysis, and digital marketing has resulted in the creation of new employment avenues (Waugh et al., 2020). However, it is important to note that the overall impact of these job creations may vary across different regions and industries. Scholars have also examined the role of government policies and interventions in mitigating the impact of economic recessions on unemployment (Antes, 2023). These studies highlight the importance of targeted initiatives such as skills development programs, retraining schemes, and entrepreneurship support to address unemployment challenges in the digital and information ages.

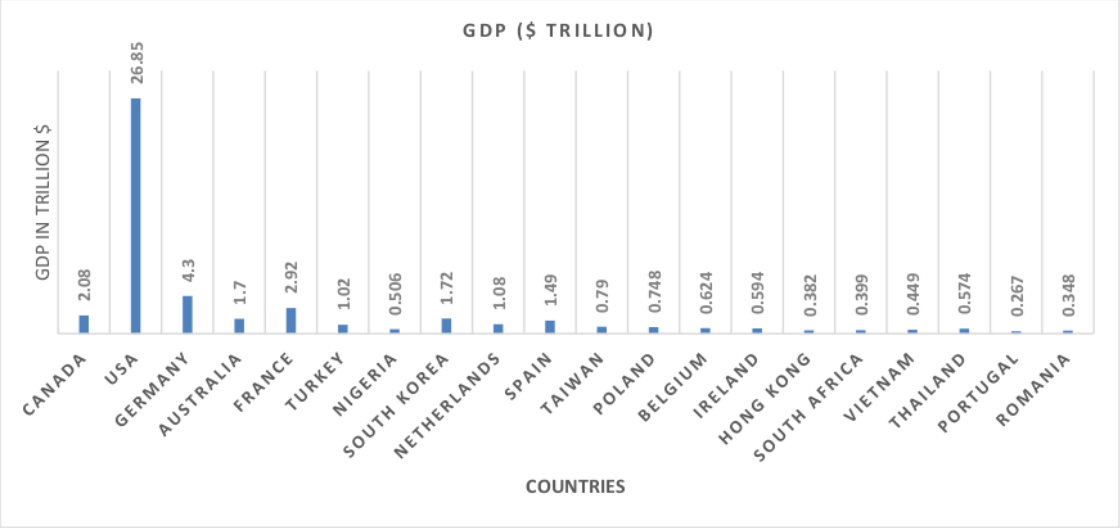

Figure 1. The GDP of the 20 countries in $ in Trillion, Source: World of Statistics (July 2023)

According to Table 1 and its associated Figure 1, the USA has the greatest GDP among the 20 countries that were chosen, with a value of 26.85, which is incomparable to those with the lowest GDPs, like Portugal and Romania. Additionally, the $1500 average pay is equivalent to $1550 and 7.5%. This demonstrates that greater wages are not a given in nations with the largest GDPs. The USA has the largest GDP, as indicated in Table 1 and Figure 2, but it is unable to compete with Australia in terms of salaries due to Australia's higher minimum salary of $2022 and lower unemployment rate of 7.6% of the total population. In a similar vein, a nation's ability to effectively manage its GDP and minimum wages will determine how high its unemployment rate is. Considering that low minimum salaries are always a sign of a lack of competitiveness in the technology and other resources.

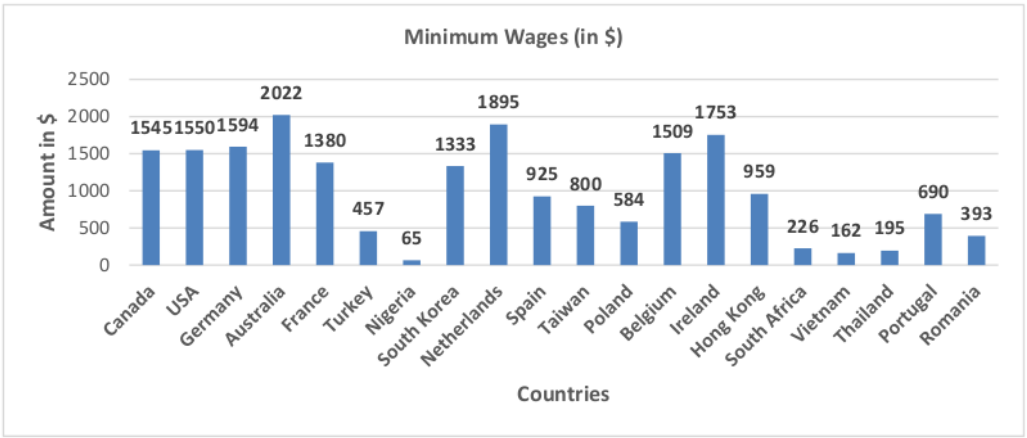

Figure 2. The minimum wages in 20 selected countries, Source: World of Statistics (July 2023)

The development of information and digital technology has had a significant impact on both the job market and the world economy. In particular, technology has prompted disruptions and transformations in numerous established industries while also opening up new prospects for innovation, entrepreneurship, and job creation (Postua et al., 2021). Several studies have examined the relationship between economic recessions and unemployment rates such as the studies by (Byaro et al., 2023 & Casal et al., 2023). These studies highlight how recessions can lead to job losses across various sectors, including those within the digital and information industries. The decline in economic activity often results in reduced demand for goods and services, leading to layoffs and higher unemployment rates (Byaro et al., 2023). While the digital and information ages have brought about significant technological advancements, they have also caused shifts in the labor market. Automation and digitization have led to the displacement of certain job roles, creating a mismatch between the skills available in the workforce and the demands of the evolving job market (Ogbonna et al., 2022). This mismatch can contribute to unemployment, particularly during economic downturns.

Economic recessions can disproportionately affect certain regions, exacerbating regional disparities in employment. The digital and information ages have seen the concentration of economic opportunities in certain urban areas, leading to uneven distribution of jobs (Gwyn & Gerry, 2023). Regions heavily dependent on industries vulnerable to recessions, such as manufacturing or traditional retail, may experience higher unemployment rates despite the presence of digital and information sectors (Papapetrou & Tsalaporta, 2021). The digital age has also facilitated the rise of entrepreneurship and startups. During economic recessions, individuals may turn to entrepreneurship as a response to limited job opportunities. While startups can contribute to job creation, they also face higher risks during economic downturns, as funding and consumer demand may decrease. Understanding the dynamics of startup ecosystems and their resilience in the face of recession can provide insights into employment trends in the digital and information ages (Ahuru, 2022). The digital and information ages have brought about significant advancements, but not all individuals have equal access to digital technologies and opportunities. The digital divide, characterized by disparities in internet access, digital skills, and technology adoption, can exacerbate inequalities in employment. Those who lack digital literacy or access to online job platforms may face greater challenges in finding employment during economic recessions.

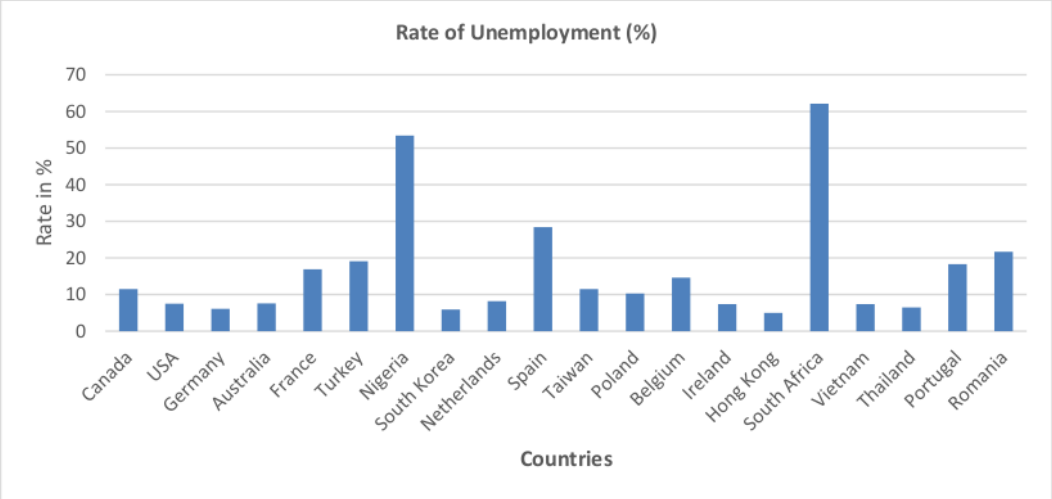

Figure 3. The rate of unemployment in 20 selected countries, Source: World of Statistics (July 2023)

The two African nations of Nigeria and South Africa, with respective unemployed rates of 53.4% and 62.1% of their entire populations, have the greatest rates of unemployment, according to data in Table 1 and Figure 3. And the low GDP and low minimum wage amounts—$506 billion and $65; $399 billion and $226 as seen above have something to do with this. Digitalization's effects on the labour market can be intricate and multidimensional. On the one hand, digitalization has the potential to generate new jobs in industries like internet marketing, data analytics, and software development (Ahuru, 2022). During periods of digital disruption, there may be a greater need for specific education and training because these industries require new skills and knowledge. The lowest unemployment rates are found in South Korea and Hong Kong, which highlights the two countries' strong economic importance. This shows that these two countries properly manage the economic and technological growth in their respective areas, which results in low unemployed rates.

The digital and information ages have brought about rapid technological advancements, leading to a growing demand for workers with specialized skills. However, there is often a mismatch between the skills possessed by job seekers and the skills required by employers in the digital economy (Gwyn & Gerry, 2023). This skills gap can contribute to higher unemployment rates, especially during economic recessions when employers may be more selective in their hiring. The digital age has also given rise to the gig economy, characterized by short-term contracts and freelance work facilitated by digital platforms (Topal, 2018). While this flexible work arrangement has provided opportunities for income generation, it can also lead to increased job insecurity and lower job stability during economic downturns. Workers in the gig economy may be more vulnerable to unemployment as they often lack the same protections and benefits as traditional employees.

Discussion of Findings

Despite the fact that it is quite rare to hear that digitalization leads to job displacement and unemployment, particularly in businesses that are substantially automated (Antes, 2023; Gwyn & Gerry, 2023), For instance, automation and robotics have significantly reduced the number of jobs in the industrial sector. The growth of e-commerce and online purchasing has also harmed traditional retail businesses, resulting in the closure of numerous brick-and-mortar stores and the elimination of retail jobs (Ahuru, 2022; Oye & Sciences, 2011). The growth of the gig economy, which has given independent contractors and freelancers new chances to find work through online marketplaces like Uber, Fiverr, and Upwork, is another component of the digitization of the economy (Waugh et al., 2020). However, the world of gig economy has also come under fire for lacking job security, benefits, and labour protections, raising questions about the standard of employment and long-term financial security for those employed in this field.

The winner-take-all dynamics that have emerged in the digital economy, where a small percentage of people and businesses amass enormous riches while the majority struggles with low-paying jobs and limited economic options, are examined by Gwyn and Gerry (2023). Similar to this, the Ahuru (2022) work explores the wider effects of technology development and automation on employment. Although technology has advanced quickly and there is more connectedness than ever before, the author contends that these innovations have also led to a reduction in the need for human employment. According to Papapetrou and Tsalaporta (2021), the low national GDP was caused by a decline in average earnings across industries. If a pay decline happens at the mean, this indicates that wage evolution in different economic sectors during the crisis differed. According to earlier research, workers at the top of the conditional wage distribution do not capture a disproportionate share of the salaries that have remained in the Greek economy throughout the same time period. According to Hean and Deng (2023), minimum wages had a serious detrimental effect on employment prior to the recession. The effects of minimum wages on unemployment during the recession were minimal.

This study also demonstrates that there are some promising and workable solutions to the problem of unemployment in a downturn in the economy: Policymakers can invest in education and training programmes to assist people develop the skills required for jobs of the future, particularly those that are in high demand in the digital economy, by investing in innovation and training (Mungodla et al. 2019). Long-term, this can lower unemployment and boost economic growth. Plans for employment retention: During economic downturns, governments might put in place plans for job retention that give firms subsidies to keep employees employed rather than fire them. In the medium term, up until the economy recovers, this can aid in maintaining employment levels (Gwyn & Gerry, 2023). Extension of emergency unemployment benefits: To assist unemployed people during periods of economic recession, governments may want to explore extending and expanding emergency unemployment benefits. In a nutshell, there is not an instant solution for the sophisticated and varied issue of unemployment during a downturn in the economy (Topal, 2018). In order to mitigate the effects of the recession on employment and encourage long-term economic growth, these and other viable methods might be combined.

CONCLUSION

This study examines how different countries' GDP growth is impacted by economic recessions. The authors emphasise the connections among the 20 countries' GDP, minimum wages, and unemployment rates. The study also sheds light on how economic recession, slow GDP growth, and fast GDP growth in various nations relate to one another. The global economic recession had a huge influence and resulted in a rise in unemployment because there were less work prospects. The labour market had a difficult time adjusting to remote working and the technical improvements of this era even though we were living in the digital information age. To lower unemployment rates, a mentality change and rapid acceptance of technology are now required. This study demonstrates that, despite the fact that economic digitalization has unquestionably increased opportunities for employment, it has also resulted in major displacements of employment and disruptions in a number of conventional industries. This emphasises the necessity of effective policies to promote employment, education, and training in the digital era and to make sure that the advantages of digitization are distributed more widely across various industries and individuals with all levels of competence.

The global economic recession had a huge influence and resulted in a rise in unemployment because there were less work prospects. The labour market had a difficult time adjusting to remote working and the technical improvements of this era even though we were living in the digital information age. In order to decrease unemployment rates, a mentality change and rapid acceptance of technology are now required. The study also looks at how the economic downturn has affected unemployment in various nations and areas. The authors examine variables such governmental policies, labour market dynamics, and social welfare systems as they compare unemployment rates during recessions across various economies. The goal of the research is to find trends and elements that can aid in reducing the detrimental effects of economic recessions on unemployment. Despite living in the digital and information age, economic recessions can still lead to high unemployment rates. The pandemic has exposed vulnerabilities in various sectors, particularly SMEs and entrepreneurs. Moreover, the spread of misinformation and the challenges posed by algorithms in terms of transparency and oversight are ongoing issues that need to be addressed. The COVID-19 pandemic and subsequent economic recession have had a significant impact on various aspects of society, including unemployment rates. Measures taken to contain the virus, such as lockdowns and restrictions, have particularly affected small and medium-sized enterprises (SMEs) and entrepreneurs, leading to higher unemployment levels and an increase in the number of people seeking financial aid. Additionally, the pandemic has also had negative effects on mental health, especially among children and adolescents. The impact of digital platforms on choice and quality for news consumers has been a subject of analysis and discussion. Governments have taken steps to combat fake news and disinformation, including the establishment of agencies to monitor online news and the introduction of legislation to penalize the dissemination of fake news. The manipulation of information can have significant consequences, influencing public perceptions and affecting election campaigns.

Recommendations

According to this report, the government ought to invest funds on technology and train unemployed people in new skills to increase their chances of securing distant employment. Companies should use remote work rules to lower operating costs and boost productivity. For businesses that embrace a remote working model, the government should offer tax benefits in order to foster an atmosphere that supports entrepreneurship and self-employment. People should be creative and look for opportunities for self-employment that fit with the contemporary digital era. This study makes the case for more research that other nations, particularly those in Africa, should be included in order to compare their levels of technological penetration in various economic sectors.

- Governments and policymakers should provide targeted support and financial assistance to SMEs and entrepreneurs to help them recover from the economic impact of the recession. This could include measures such as grants, tax incentives, and access to affordable loans.
- Given the negative impact of the pandemic on mental health, it is crucial to prioritize and invest in mental health services, especially for children and adolescents. This can include increasing access to mental health professionals, promoting mental health awareness, and implementing innovative policies and programs.
- Governments should continue to evaluate and regulate digital platforms to ensure transparency, choice, and quality of information for news consumers. Efforts to combat fake news and disinformation should be strengthened, and agencies responsible for monitoring online news should have the necessary resources and authority.
- Educating the public, especially young people, about critical thinking skills and digital literacy is essential in navigating the digital age. This can help individuals better discern and evaluate the information they encounter online, reducing the impact of misinformation.
- Policymakers should coordinate efforts and share best practices across countries to mitigate the impact of economic recessions. This can include sharing information on successful strategies for job creation, economic recovery, and support for affected industries.

Overall, addressing the impact of economic recessions on unemployment in the digital and information age requires a multi-faceted approach that combines financial support, mental health services, regulation of digital platforms, promotion of critical thinking, and international collaboration.

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4. Review of Literature

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5. Research Methodology

Excellent	**Very Good**	Satisfactory	Average	Below Average

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Reviewer's Name: Dr. Muhammad Atif Nawaz
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Date: 25 september 2023
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Reviewer's Name: Dr. Tusawar Iftikhar Ahmad
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