Knowledge transformation on the economic recovery in post-pandemic

Sri Sarjana[1], Mahsa Amira Anindya Najib[2], Innayah Kusuma Dewi[3], Nur Khayati[4]

Land Transportation Department, Politeknik Transportasi Darat Indonesia - STTD, Indonesia [1]
Vocational Education Program, Universitas Indonesia, Indonesia[2]
Psychology Department, Universitas Muhammadiyah Surakarta, Indonesia[3]
Sociology and Anthropology Program, SMA Negeri 1 Cikarang Utara, Indonesia [4]

Abstract

Economic recovery is the restoration of the business cycle due to the crisis marked by increased activity in various sectors. Meta-analysis is applied to find novelty through qualitative research development. Knowledge mapping during the pandemic was carried out through an analysis of 995 scientific journals obtained from searches on Google Scholar regarding the concept of economic recovery. This study finds that the scientific evolutionary research found several topics, including privatization, forecast, zakat, adoption, free zone, financing, and pandemic crisis. The novelty of the issues obtained is indicated to have a new value that has the potential to be further developed for the dissemination and diversity of knowledge. Knowledge development on the concept of economic development is expected to improve economic conditions in a business environment experiencing turbulence due to health crises.

Keywords: Economic recovery; knowledge transformation; meta-analysis; Covid-19 pandemic

Introduction

During the Covid-19 pandemic, research that revealed economic recovery worldwide became the primary focus for experts in various sectors, especially in the financial field. Several studies that have been inspired in describing the critical role of economic recovery during the pandemic are described in the following concepts, including that China was the first country to show economic recovery after the slowdown due to the health crisis (Wang & Zhang, 2021). Economic slowdown during the pandemic also occurred in India, where a significant recession happened in the labor-intensive informal sector, energy-intensive sector, and capital goods, so an economic recovery strategy was needed (Pradhan & Ghosh, 2021) after the lifting of the post-pandemic access restrictions in Pakistan, economic activities followed business-as-usual which could lead to a bigger disaster due to the drastic increase in carbon output (Ali Shah et al., 2021).

In general, the study of economic recovery examines various things applied to regenerate the economic conditions of countries experiencing a crisis caused by pandemics and must seek to develop strategies to recover it. However, although several studies have been carried out that examine various aspects that affect the health crisis that occurred, multiple problems related to economic recovery in many countries are still a significant concern that must be addressed immediately to resolve them. Some of the problems currently facing that substantially impact economic conditions include pandemics that threaten productivity and disrupt innovation output that may occur over the next seven years. Its growth will probably be felt longer (Wang et al., 2021); the existence of several countries that rely on the tourism sector as the primary source of state revenue so they have high economic vulnerabilities that must act immediately through their competitiveness (Salinas Fernández et al., 2022), pandemic causes short-term fiscal pressures

[1]E-mail: srisarjana@gmail.com

[2]E-mail: mahhssnindya@gmail.com

[3]E-mail: innayadewi123@gmail.com

[4]E-mail: nurkayati.pch@gmail.com

that pose serious risks, so innovative budgetary policies are needed to regenerate a sustainable economy (Estevão, 2020).

Solutions have been proposed in order to describe the concept of economic recovery in detail in various research sectors, but the solutions that have been described still tend to be partially handled, some examples of solutions described in handling cases include understanding related to health and climate change can help increase mitigation engagement which can be done through political affiliation or subjective attribution (Thaker & Cook, 2021), need to implement novel time fractional derivative models for pandemic mitigation and economic recovery in rural and urban areas (Yu et al., 2021), efforts to anticipate the financial crisis can be done by using a local projection estimator that takes into account the heterogeneity of parameters and cross-sectional dependencies (Bakas & Mendieta-Muñoz, 2020), trade-offs become considerations and choices that should be chosen in simple economic modeling during the pandemic (Tisdell, 2020), strategies aimed at controlling the pandemic can be introduced by utilizing the self-correcting intelligent pandemic prediction model as a concrete step for optimizing the performance of economic processes (Tang et al., 2021).

The variety of solutions sought to assist economic recovery has a unique value and different backgrounds. Knowledge mapping is one of the unique methods developed in this study to describe knowledge transformation from various locations to support efforts to accelerate economic recovery using the concepts studied. Contributions from several studies have tried to provide problem-solving to accelerate economic recovery, although still partially, but none have offered fundamental ideas that present concepts or theories that have novelty through the development of knowledge in the future. Therefore, wondered will reveal concepts and theories that have extreme potential for the novelty to support knowledge development, especially to encourage the acceleration of economic recovery.

For this reason, the purpose of this study is to obtain novelty in the form of variables or indicators derived from the concept of economic recovery. Mapping on economic recovery is done to get derivatives that can be used as variables or indicators in further research. Knowledge transformation applied through mapping the concept of economic recovery is directed to describe the novelty of the theory or topic of derived results that are expected to be helpful for the development of research. Therefore, the evolution of knowledge related to the concept of economic recovery needs to be followed to find patterns and trends of study by the expected needs and can be used to develop future knowledge. The evolution of knowledge assement can trigger the growth of new strategies expected to emerge to help restore post-pandemic economic conditions.

Literature Review

The economic recovery strategy needs to be carried out by optimizing the digital ecosystem by digitizing the market so that business actors can continue to carry out their business activities even during a covid-19 pandemic, where business actors are starting to change in reviving their businesses and adjusting to the new average era with use information technology in their industry (Hasibuan et al., 2022). It is necessary to take appropriate steps in the context of economic recovery from various stakeholders to realize sustainable development goals that are closely related to the welfare of the citizens; it is also essential to introduce new approaches to addressing fiscal policies that are more effective to accelerate economic recovery (Fauzia, 2021). A country's economic recovery after the covid-19 pandemic seems beneficial for other countries with various income levels, including increasing the amount of energy consumption which directly increases economic growth (Wang & Zhang, 2021). This economic recovery is one way to restore economic efficiency, which can be done well if there is cooperation between the government and the community as well as business actors; in addition, that economic recovery aims to protect, maintain and improve the ability of business actors to manage their businesses and help increase people's purchasing power and restore the economy as a whole (Saputri & Fasa, 2021). One form of stimulus for economic recovery is a social safety net policy in the form of providing social assistance to the poor and communities affected by covid-19, where the stimulus is given to reduce the economic impact, especially to vulnerable groups and business groups, so that bankruptcy does not occur (Anas, 2021). Furthermore, Anas (2021) explained that the policy also supports efforts to recover the economy and curb the increase in the poverty rate where the provision of social assistance is part of the economic recovery policy to meet food needs, maintain purchasing power and the level of public consumption as well as to curb the increase in the poverty rate.

Economic recovery is prepared to refer to a framework for predicting the economy in the future due to conditions that experience different uncertainties, which can be done by developing a Bayesian framework model to continually improve dynamically evolving expectations (Teng et al., 2022). The health crisis is expected to continue in the medium or long term, requiring a relatively long time for economic

recovery. This situation can create opportunities by creating competitiveness to achieve stronger conditions that need to be facilitated by public policies (Fernandez et al., 2022). The strategies implemented in economic recovery for small and medium enterprises can be done by assisting business actors, providing tax incentives, relaxation, and credit restructuring, expanding working capital financing, product support, and e-learning training. In contrast, the economic recovery strategy developed in the tourism sector is optimized through various activities, including product development, destination development, human resource development, institutional development, and better infrastructure management (Metalia & Imtikhanah, 2022). Multiple steps can be taken to accelerate economic recovery during the Covid-19 pandemic by focusing on planning, socio-economics, health economics, political economy, economic distribution, and economic and monetary transmission, which are expected to create opportunities for people's financial independence (Zenrif & Mustofa, 2022).

The decisive role played by domestic policies designed to promote rapid economic recovery and prevent a prolonged recession, it is necessary to expand credit after the crisis occurs and implement measures to increase liquidity which are expected to make the economy more resilient to financial shocks, where this is implemented due to fiscal policy stimulus at the domestic level, which refers to government spending, has the potential to be weak in preventing the continuation of the downward trend in the economy that occurred during the ongoing crisis. In contrast, fiscal stimulus before a shock can increase economic resilience (Barthélémy et al., 2020). Economic recovery is considered a core component that needs support from local and central governments that support local communities to rejuvenate businesses activate business consulting services, and establish business centers to improve the community's economy so that, together with other areas, overall recovery is achieved (Neeraj et al., 2021). The economic consequences due to the pandemic pose a threat to productivity which disrupts innovation results during the crisis so that it threatens economic recovery, and macroeconomic shocks during a crisis tend to lead to a reduction in innovation output (Wang et al., 2021).

The fiscal stimulus policy during the pandemic to stabilize economic resilience initiated by Barthélémy et al. (2020) in a relatively stable national financial system situation and condition before the pandemic is very helpful in maintaining economic stability, but if it occurs in countries whose financial system is unstable due to high debt burden, the fiscal stimulus can have an impact on decreasing state revenue in the tax sector, so it is necessary to find creativity and innovation that can be developed based on local wisdom in the financial industry. The concept of rejuvenating the business, activating business consulting services, and establishing a business center in support of economic recovery developed (Neeraj et al., 2021) during a health crisis can take place optimally for regions or countries that have a relatively high level of community welfare and the country's economic system is in good shape. However, this concept is challenging to implement for regions or countries with a group of interest, and the country's financial plan is under challenging conditions, coupled with various social restrictions to reduce the spread of the virus. Of the three suggested concepts, only the most rational business consulting service can be done by seeking online consultation.

Research Method

The diversity of knowledge transformation is an expected goal to create a new strategy in knowledge development through mapping the concept of economic recovery as a step to accelerate economic conditions on a national and global scale. Diversity development is presented through mapping in the form of evolution for knowledge (Najib et al., 2021). Qualitative research is implemented by analyzing scientific literature obtained from scientific journals published during the pandemic. Qualitative research can be applied through literature reviews in journal publications with the aim of knowledge development (Sarjana, 2021). Meta-analysis is used by utilizing the bibliometric analysis to obtain various new concepts or topics that can be followed up that are relevant to economic recovery. Implementation of the meta-analysis using patterns developed by bibliometric analysis to get new issues for further knowledge development. Bibliometric analysis is applied to the result of scientific evolutionary research (Donthu et al., 2021) and serves as an analysis of knowledge mapping data (Danvila-del-Valle et al., 2019). Knowledge transformation patterns and trends can be identified through scientific evolution by analyzing various scientific journals as a database. Monitoring the growth of knowledge development related to the topic under study can be used to see current research trends (Sarjana, 2021). Knowledge development is currently much emphasized in disseminating scientific journals, which are encouraged by all stakeholders in universities and researchers according to their respective fields of expertise. Theories and topics that have novelty and as outputs from the results of this study are expected to be followed up and developed more

broadly to encourage economic recovery and lead to sustainable development.

The database in the form of scientific journals in this study was collected in December 2021 on the concept of economic recovery. Scientific searches of journal publications obtained during the covid-19 pandemic took place in the time range from January 2020 to the time of collecting the database on the concept under study. For publications in the last two years, the search results obtained 995 scientific journals from scientific searches by inputting keyword economic recovery on all journal publications. The data analysis carried out in this research is sourced from Google Scholar, which utilizes a database of scientific journals related to economic recovery, displayed in the form of network visualization and density using the VOSviewer application. The visualization presented by VOSviewer is displayed attractively and elegantly (Sarjana et al., 2022), shown in the form of visually informed mapping (Abdullah et al., 2020), and the results of the analysis are presented in an attractive visualization (Sarjana et al., 2021). Scientific journal specifications refer to scientific evolution resulting from the disclosure of various theories and topics raised to discover the trends that most often appear for research and those that are still relatively rarely studied so that they can be developed in future research. Topics that have novelty from the results of this analysis are expected to become new issues that can be further developed, especially knowledge development related to economic recovery. Follow-up knowledge development and further research are essential activities that can accelerate the recovery of conditions due to the impact of the pandemic.

Result and Discussion
Characteristics of journal publications on the concept of economic recovery

An interactive and more exciting presentation of bibliometric results on the concept of economic recovery can be easily understood and recognized in the visualization network and visualization density display. Data processing was carried out on 995 scientific journals that were searched through the input of economic recovery keywords published during the pandemic. Clustering and counting the number of citations are also added to complete the analysis in deepening the scientific evolution of the journal publications under study. VOSviewer is applied as a tool in charge of analyzing the concept of economic recovery in the hope of producing novelties that are expected to be useful for knowledge development.

Table 1. Specifications of The Journal Publication Range During The Pandemic

Publication year	2020-2021
Papers	995
Citations	14104
Cites/year	14104.00
Cites/paper	14.17
Authors/paper	2.3
h-index	43
g-index	111
hA-index	43

Searching scientific journal publication data on the concept of economic recovery during a pandemic collected as many as 995 articles spread across various journals and publishers. The number of citations obtained from all scientific journals reached 14104, with the number of cites/year 14.17 and the average number of authors/paper 2.3. While the quality index of documented scientific journals is worth h-index 43, g-index 111, and hA-index 43, which means that the concept of economic recovery is a significant concern and requires rapid follow-up for academics and researchers during a pandemic to produce studies that have the value of novelty and the latest concepts in helping to improve the existing conditions due to the health crisis.

The grouping of various topics that appear in the concept of economic recovery during a pandemic is translated into eight clusters, as shown in Table 2. The covid-19 pandemic is the main topic that appears at the beginning of the first cluster. For subsequent sets, the favorite subjects include the global economy, economic recession, disaster recovery, growth plan, adaptability, economic development, and financial crisis. Some of these topics direct several other issues in the same cluster with patterns and concepts that have similarities and conformity. The result of several novel problems and local environmental conditions is an important concept that must be selected and determined in policy making by the competent authorities so that the impact of the disaster due to this health crisis can be resolved immediately. The victim rate can be suppressed as low as possible.

Table 2. Clustering of Analysis Results on The Concept of Economic Recovery

Cluster	2020-2021
1	Covid19 pandemic, economic downturn, human right, real economy, policy maker, small business, poverty, democracy, entrepreneurship
2	Global economy, global financial crisis, competition, monetary policy, slow economic recovery, health sector, uncertainty, world economy
3	Economic recession, business activity, acceleration, economic recovery program, economic shock, national economic recovery, recovery plan, social safety net, stimulus, tourism sector
4	Disaster recovery, government support, local economic recovery, social capital, private sector, funding, local economic recovery
5	Growth plan, hospitality industry, policy maker, socio economic recovery, gross domestic product, competitiveness
6	Adaptability, climate change, health system, social distancing, post disaster recovery, vaccine, second wave
7	Economic development, economic recovery period, investment policy, policy implication, post pandemic era, privatization
8	Financial crisis, international monetary fund, industrial relation, trade policy, zakat, policy response, resilience, social impact

Table 3. Ranked in Top Ten Journal Publications on The Concept of Economic Recovery

Rank	TC	Title	Source Journal	Authors	Publisher
1	3362	The socio-economic implications of the coronavirus pandemic (covid-19): A review	International Journal of Surgery	M Nicola, Z Alsafi, C Sohrabi, A Kerwan	Elsevier
2	1886	Pandemics, tourism and global change: a rapid assessment of covid-19	Journal of Sustainable Tourism	S Gössling, D Scott, CM Hall	Taylor & Francis
3	392	Do credit market shocks affect the real economy? Quasi-experimental evidence from the great recession and" normal" economic times	American Economic Journal: Economic Policy	M Greenstone, A Mas, HL Nguyen	American Economic Association
4	296	The benefits and costs of using social distancing to flatten the curve for covid-19	Journal of Benefit - Cost Analysis	L Thunström, SC Newbold, D Finnoff	Cambridge University Press
5	275	Economic uncertainty before and during covid-19 pandemic	Journal of Public Economics	D Altig, S Baker, JM Barrero, N Bloom, P Bunn	Elsevier
6	261	Investigating the emerging Covid-19 research trends in the field of business and management: A bibliometric analysis approach	Journal of Business Research	S Verma, A Gustafsson	Elsevier
7	245	A literature review of the economics of Covid-19	Journal of Economic Surveys	A Brodeur, D Gray, A Islam	Wiley Online Library
8	243	Tourism in a world with pandemics: local-global responsibility and action	Journal of Tourism Futures	T Jamal, C Budke	Emerald
9	179	The extent of covid-19 pandemic socio-economic impact on global poverty. a global integrative multidisciplinary review	American Journal of Economics	M Buheji, K da Costa Cunha, G Beka	Scientific & Academic Publishing
10	154	Beyond panic buying: consumption displacement and Covid-19	Journal of Service Management	MC Hall, G Prayag, P Fieger, D Dyason	Emerald

The number of citations obtained in scientific journal publications during the pandemic looks very large, especially in rankings one and two shown in table 3. The high number of citations indicates that the concept under study has a high level of urgency and is currently a source of attention throughout the world to accelerate recovery in various sectors of life, especially in economic sectors. For this reason, the focus of attention on health and the economy must be followed up immediately to create a situation and condition of society that returns to normal as before.

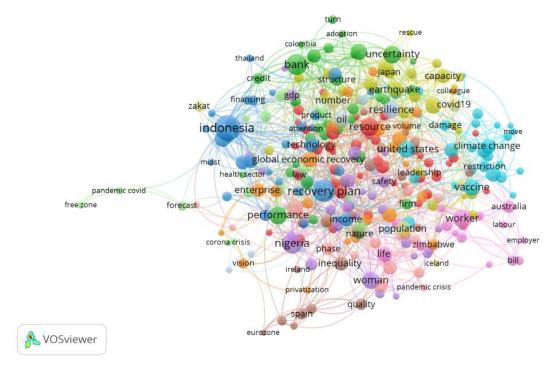**Network and Density Visualization Analysis Results**

Figure 1. Network Visualization Analysis

The analysis results presented in the form of network visualization and density are displayed interactively and attractively, showing the interrelationships between the topics studied in Figure 1. The node dimensions indicate the frequency of the issues published in scientific journals; the higher the frequency of publications on the subjects studied, the larger the node dimensions will be. Node color describes groups or clusters with compatibility; nodes with the same color as the topic under study are in the same set and have topic compatibility. Relationships between nodes depicted as lines or threads indicate a connection to the case. Some subjects with the most frequent occurrences in journal publications compared to other issues based on relatively larger node sizes include recovery plans, Indonesia, Nigeria, uncertainty, resources, banks, climate change, women, and vaccines. This topic has been widely researched and published in scientific journals, and if it is to be investigated further, it will require an expansion and deepening of the concept. Meanwhile, several other topics that are new and rarely published include privatization, forecast, zakat, adoption, free zone, financing, and pandemic crisis. This research topic that is still seldom published needs to be followed up for research so that it can produce new knowledge through the evolution of knowledge to help accelerate the resolution of this health crisis.
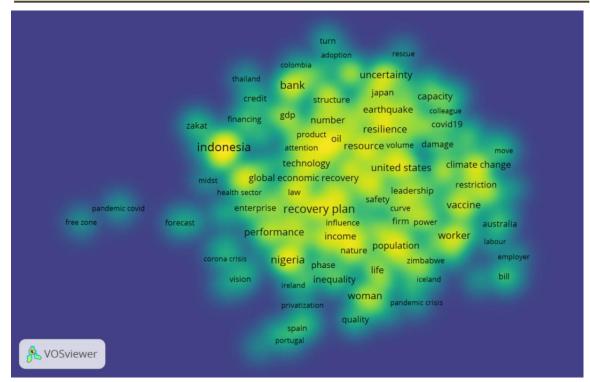
Figure 2. Density Visualization Analysis Results

The brightness of the colors depicted in Figure 2 shows the level of frequency of topics published in scientific journals. The brightness level of the color is similar to the size of the nodes displayed in the visualization form. The novelty of research topics generally refers to issues with lower color brightness. The desired expectation is that some of the novelty of the matter is a new variable and not widely known, so knowledge development has a greater chance. Academics and researchers have great opportunities for knowledge development, especially related to the topics studied, which are expected to give birth to news and innovations that can be used for the benefit of the people.
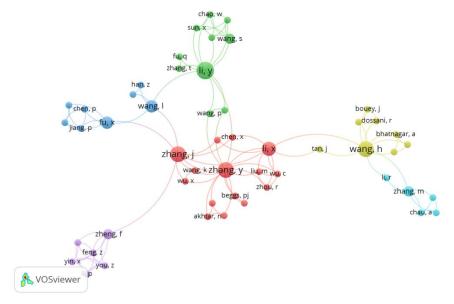

Figure 3. Author Involvement in Network Visualization

The relationship of the authors in the distribution network of economic recovery topics published in scientific journals is presented in Figure 3, which explains the relationship between them. The concept of economic recovery has authors with many publications centered on Zhang J, Zhang Y, and Li X because they have high similarities and correspondences. Several other authors have correlations with them, including Li Y, Wang H, Wang I, Zheng F, and Fu X. Colors on nodes indicate clusters with the same topic depth. There are relationships with other groups which are characterized by connections between nodes. The more sets formed, showing that the concept of economic recovery is analyzed and explored more broadly and in various ways. The more authors research, the more new topics will emerge.

Various strategies are needed to encourage the acceleration of economic recovery in several regions to strengthen the economy of scale. The system developed in this study is expressed in the form of knowledge transformation with the hope of enhancing the national economy through the development of derivatives on the concept of economic recovery. In contrast to other research, this study produces findings in another structure where several new theories or ideas are found as derivatives obtained using knowledge mapping to help improve the economic system, which is currently in a slump due to the health crisis. The findings as part of novelty produced in the explanations presented in the discussion are new patterns recommended in the form of new theories or concepts to be followed up by researchers, academics, or the government to accelerate economic improvement.

Conclusions, suggestions and limitations

Economic recovery can be developed by strengthening the existing resources, including expanding and deepening the concept of knowledge in dealing with increasingly uncertain situations and conditions. The deepening and expansion of knowledge development can be done through the scientific evolution of the concepts studied to strengthen the quality of science so that the mindset can be patterned intelligently. The scientific journal publications on economic recovery during a pandemic obtained several topics and theories that have novel value and are recommended to be applied to further research, including privatization, forecast, zakat, adoption, free zone, financing, and pandemic crisis. The positive trend in knowledge development occurred in the concept of economic recovery, which experienced significant growth during the pandemic along with the urgency that must be regenerated immediately, especially about the health and financial crises.

References

Abdullah, K. H., Hashim, M. N., & Abd Aziz, S. (2020). A 39 years (1980-2019) bibliometric analysis of safety leadership research. *Test Engineering & Management*, *83*, 4526–4542.

Ali Shah, S. A., Longsheng, C., Solangi, Y. A., Ahmad, M., & Ali, S. (2021). Energy trilemma based prioritization of waste-to-energy technologies: Implications for post-COVID-19 green economic recovery in Pakistan. *Journal of Cleaner Production*, *284*(124729), 1–13. https://doi.org/10.1016/j.jclepro.2020.124729

Anas, A. (2021). Transformasi Bantuan Sosial Saat Pembatasan Sosial Berskala Besar dan Pemberlakuan Pembatasan Kegiatan Masyarakat. *Monas: Jurnal Inovasi Aparatur*, *3*(1), 257–268.

Bakas, D., & Mendieta-Muñoz, I. (2020). Financial crises and economic recovery: Cross-country heterogeneity and cross-sectional dependence. *Economics Letters*, *195*(109435), 1–4. https://doi.org/10.1016/j.econlet.2020.109435

Barthélémy, S., Binet, M. E., & Pentecôte, J. S. (2020). Worldwide economic recoveries from financial crises through the decades. *Journal of International Money and Finance*, *105*(102204), 1–15. https://doi.org/10.1016/j.jimonfin.2020.102204

Danvila-del-Valle, I., Estévez-Mendoza, C., & Lara, F. J. (2019). Human resources training: A bibliometric analysis. *Journal of Business Research*, *101*, 627–636. https://doi.org/10.1016/j.jbusres.2019.02.026

Donthu, N., Kumar, S., Mukherjee, D., Pandey, N., & Lim, W. M. (2021). How to conduct a bibliometric analysis: An overview and guidelines. *Journal of Business Research*, *133*, 285–296. https://doi.org/10.1016/j.jbusres.2021.04.070

Estevão, M. (2020). Climate-Smart Fiscal Policy Can Foster a Lasting Economic Recovery. *One Earth*, *3*(3), 273–276. https://doi.org/10.1016/j.oneear.2020.08.017

Fauzia, A. (2021). Reconstruction the Major's Policy in Order to Economic and Poverty Recovery in Pandemic at Pasuruan City East Java, Indonesia. *Jurnal Perencanaan Pembangunan: The Indonesian Journal of Development Planning*, *5*(2), 160–176. https://doi.org/10.36574/jpp.v5i2.196

Fernandez, J. A. S., Martínez, J. M. G., & Martín, J. M. M. (2022). An analysis of the competitiveness of the tourism industry in a context of economic recovery following the Covid-19 pandemic.

Technological Forecasting & Social Change, *174*(121301), 1–10. https://doi.org/10.1016/j.techfore.2021.121301

Hasibuan, S. M., Lestari, F. A., & Rajana, J. P. (2022). Peranan Kemasan (Packaging) Dalam Meningkatkan Pemasaran Digital Produk Usaha Mikro Kecil Menengah (Umkm) Di Desa Firdaus. *Jurnal Pengabdian Kepada Masyarakat*, *1*(9), 2029–2034.

Metalia, M., & Imtikhanah, S. (2022). Post-Pandemic Economic Recovery Strategy Through The Umkm And Tourism Sector: Experience From. *Agregat: Jurnal Ekonomi Dan Bisnis*, *6*(1), 72–94. https://doi.org/10.22236/agregat_vol6/is1pp72-94

Najib, M. A. A., Sarjana, S., & Khayati, N. (2021). Knowledge Development of Spiritual Resilience Concepts Faced During the Covid-19 Pandemic in Meta-Analysis. *The 5th International Conference on Islamic Studies (ICONIS) 2021*, 261–272.

Neeraj, S., Mannakkara, S., & Wilkinson, S. (2021). Evaluating socio-economic recovery as part of building back better in Kaikoura, New Zealand. *International Journal of Disaster Risk Reduction*, *52*(101930), 1–10. https://doi.org/10.1016/j.ijdrr.2020.101930

Pradhan, B. K., & Ghosh, J. (2021). COVID-19 and the Paris Agreement target: A CGE analysis of alternative economic recovery scenarios for India. *Energy Economics*, *103*(105539), 1–13. https://doi.org/10.1016/j.eneco.2021.105539

Salinas Fernández, J. A., Guaita Martínez, J. M., & Martín Martín, J. M. (2022). An analysis of the competitiveness of the tourism industry in a context of economic recovery following the COVID19 pandemic. *Technological Forecasting and Social Change*, *174*(121301), 1–10. https://doi.org/10.1016/j.techfore.2021.121301

Saputri, S., & Fasa, M. I. (2021). Pemulihan Ekonomi Domestik Terhadap Umkm Terdampak Covid-19. *JIEP: Jurnal Ilmu Ekonomi Dan Pembangunan*, *4*(2), 510–522.

Sarjana, S. (2021). Perspektif Urban Public Transportation dalam Kajian Meta-Analysis. *Media Komunikasi Teknik Sipil*, *27*(2), 277–287. https://doi.org/mkts.v27i2.40635

Sarjana, S., Najib, M. A. A., & Khayati, N. (2021). Bibliometric Analysis to Encourage the Development of Digital Economy Scientific Studies. *Advances in Economics, Business and Management Research*, *198*, 14–21. https://doi.org/10.2991/aebmr.k.211207.002

Sarjana, S., Widokarti, J. R., Fachri, H., & Pranita, D. (2022). Hybrid Energy to Drive Renewable Energy Diversity in Bibliometric Analysis. *International Journal of Energy Economics and Policy*, *12*(1), 500–506. https://doi.org/10.32479/ijeep.11956

Tang, X., Li, Z., Hu, X., Xu, Z., & Peng, L. (2021). Self-correcting error-based prediction model for the COVID-19 pandemic and analysis of economic impacts. *Sustainable Cities and Society*, *74*(103219), 1–10. https://doi.org/10.1016/j.scs.2021.103219

Teng, B., Wang, S., Shi, Y., Sun, Y., Wang, W., Hu, W., & Shi, C. (2022). Economic recovery forecasts under impacts of Covid-19 ☆. *Economic Modelling*, *110*(105821), 1–20. https://doi.org/10.1016/j.econmod.2022.105821

Thaker, J., & Cook, C. (2021). Experience or attribution? Exploring the relationship between personal experience, political affiliation, and subjective attributions with mitigation behavioural intentions and COVID-19 recovery policy support. *Journal of Environmental Psychology*, *77*(101685), 1–12. https://doi.org/10.1016/j.jenvp.2021.101685

Tisdell, C. A. (2020). Economic , social and political issues raised by the COVID-19 pandemic. *Economic Analysis and Policy*, *68*, 17–28. https://doi.org/10.1016/j.eap.2020.08.002

Wang, L., Zhang, M., & Verousis, T. (2021). The road to economic recovery: Pandemics and innovation. *International Review of Financial Analysis*, *75*(101729), 1–10. https://doi.org/10.1016/j.irfa.2021.101729

Wang, Q., & Zhang, F. (2021). What does the China's economic recovery after COVID-19 pandemic mean for the economic growth and energy consumption of other countries? *Journal of Cleaner Production*, *295*(126265), 1–20. https://doi.org/10.1016/j.jclepro.2021.126265

Yu, X., Zhang, Y., & Sun, H. (2021). Results in Physics Modeling COVID-19 spreading dynamics and unemployment rate evolution in rural and urban counties of Alabama and New York using fractional derivative models. *Results in Physics*, *26*(104360), 1–15. https://doi.org/10.1016/j.rinp.2021.104360

Zenrif, M. F., & Mustofa, M. L. (2022). Indonesian Economic Recovery after COVID-19 Pandemic : Qur'anic Paradigm in Community Economic Development. *Federation of Islamic Medical Associations - NST Proceedings.*, *2022*, 1–10. https://doi.org/10.11594/nstp.2022.2201