

# Literature Review on Barangay Governance Performance during COVID-19 Pandemic in South Central Mindanao, Philippines

## Abstract

Despite the unexpected spread of the COVID-19 pandemic, the Barangays ensure that optimum delivery of essential services that the community residents deserve shall not be stopped. However, barangay governance performance is typically fragmented. This fragmentation poses a key challenge for researchers at the forefront of academic journals and analytical assessments. This review underscores the economic enterprise, health programs, solid waste management, and revenue. So far, these research streams are missing comprehensive scholarly work, utilizing a literature review and a citation network analysis to address these gaps. The reviews elaborate on the indicators and development of the research themes on barangay governance performance, including a bibliometric mapping. Therefore, the barangay officials play a crucial role in sustaining essential services despite the COVID-19 pandemic to have strong positive governance performance results. It is suggested that implications for future research regarding the role of private sectors in governance performance.

**Keywords:** *public administration, governance performance, literature review, bibliometric mapping, citation network analysis, Philippines*

## INTRODUCTION

Barangay is a fundamental political as stipulated in Section 384 of the Local Government Code of 1991 and the lowest political-administrative unit (Porio & Roque-Sarmiento, 2019) Philippine governmental system. (Boysillo, 2017) believes that barangay governance plays a vital role in the empowerment of the local government units in the country, while (Aquino et al., 2017) suggest that a healthy, pleasant, or even excellent governance must be ensured to attain the optimum services that the barangay residents deserve. Besides, barangay officials are the intermediary of the government and citizens in service delivery (Gabriel et al., 2019), thereby play the primary role to improve the performance of a Barangay government.

However, recently, after the World Health Organization declared a COVID19 pandemic on March 11, 2020, city government authorities faced an urgent need to protect public health and supplement overburdened public service delivery. This unexpected spread of the COVID-19 pandemic has made the Barangays ensured that optimum delivery of essential services that the community residents deserve should not be stopped. The review aims to present literature focusing on Barangay Governance Performance during the COVID-19 pandemic underscoring economic enterprise, health programs, solid waste management, and revenue.

This would enable existing reviews in the research streams to be updated and upgraded. However, barangay governance performance is typically fragmented. This fragmentation poses a key challenge for researchers at the forefront of academic journals and analytical assessments. So far, these research streams are missing comprehensive scholarly work. In this context, this

literature review focuses on updating the outline of this field's research and attempting to be holistic by utilizing both citation network analysis and bibliometric mapping not to omit the country cross-country focus of the literature to address these gaps.

The research question focused on the general characteristics of literature about Barangay governance performance during the COVID-19 pandemic. This article's first section introduces the literature review of Barangay governance performance with the research question presented. The second section is on the methodology for the literature review. The third section discusses the primary and its indicators following the citation network analysis and bibliometric mapping. The research streams are focused, and the most important results of the studies to be analyzed are investigated. The last section is the conclusions of the study.

## **METHODOLOGY**

The review analyzes literature review utilizing both citation network analysis and bibliometric mapping from academic journal articles about Barangay Governance Performance on economic enterprise, health programs, solid waste management, and revenue. Only scientific journal articles are reviewed because they are the most comprehensive form of correspondence between researchers. The articles in this literature review are from Years 2015 to 2021, as the number of articles on the topic under consideration significantly increased.

A literature search was conducted using the ScienceDirect Elsevier literature database. ScienceDirect is a leading discovery platform of peer-reviewed literature from Elsevier journals, including thousands of open access articles. This database was used due to multidisciplinary bibliographic collections with a citation index containing articles of the prestigious scientific publications. Other scientific literature databases used were ProQuest and Google Scholar. ProQuest offers academic journals in a centralized database renowned for abstracting and indexing, while Google Scholar is a searchable collection of academic literature. We performed a search with “governance performance” and “public services delivery” as keywords based on these databases. And then, we refine publications into the five categories: 1) Barangay governance performance, 2) economic enterprise, 3) health programs, 4) solid waste management, and 5) revenue.

The selected literature reviews are analyzed employing citation network analysis and bibliometric mapping. Citation network analysis is an analytic method that systematically assesses the interconnectivity of research in a discipline (Bruner et al., 2013; Moore et al., 2005). As cited in (ström et al., 2009; Chen & Lien, 2011; Jarneving, 2007; Nerur et al., 2008; Olatokun & Makinde, 2009; Pilkington, 2006; Salami & Olatokun, 2017; White & McCain, 1998; Zhao & Strotmann, 2008), citation network analysis can be conducted at different stages, such as journal or keyword, but it is most frequently done at the author level. For this review, the unit of citation network analysis is the scholarly journal. At the same time, bibliometric mapping, as cited in (Bazm et al., 2016), provides a means to visualize academic output as publication and citation information for parameters of a particular field. It allows for the representation of information in ways that make relationships more prominent and easier to understand and can lead to new insight and discovery (Bazm et al.,

2016; Wallace & van Fleet, 2012). Thus, this provides the essential information and the underlying meaning of the methodology and the content about the existing literature for systematic and transparent analysis (Seuring & Gold, 2012), as cited by (Petkovšek et al., 2021).

## DISCUSSIONS

Based on the review of the sample studies, we can form four core clusters relevant to the attainment of barangay governance performance, such as economic enterprise, health programs, solid waste management, and revenue. These core clusters cover various perspectives, where the primary research topic and the main findings of the studies are indicated in Table 1.

Table 1. Core clusters as indicators of Barangay Governance Performance

<b>Barangay Governance Performance</b>	<b>Number of Studies</b>	<b>Authors</b>	<b>Main Research Topic</b>	<b>Main Findings</b>
Economic Enterprise	4	(Estadilla, 2020) (Fauzi & Paiman, 2021) (Shafi et al., 2020) (Affandi et al., 2020)	Impact of the COVID-19 pandemic to economic enterprise focusing on MSMEs	Despite the COVID-19, the government ensured that every Filipino is safe and the whole nation at lesser damage.
Health Programs	10	(Tabuga et al., 2020) (Kuhlmann et al., 2018) (Lotta et al., 2021) (McKibbin & Fernando, 2021) (Kuhlmann et al., 2020) (Simen-Kapeu et al., 2021) (Hassan et al., 2017) (Panagiotoglou et al., 2018) (Schwartz & Yen, 2017) (Cruz et al., 2020)	Challenges of public health crisis during the COVID-19 pandemic	*Governance strategies must be enhanced to improve the overall performance in service delivery and build resilience against risks in the long term. *Community health program at the implementation phase requires strengthened leadership, local capacities, and resources for sustainability.

Solid Waste Management	8	(Nzeadibe & Ejike-Alieji, 2020) (Domingo & Manejar, 2021) (World Health Organization and United Nations Children's Fund, 2020) (Vitorino de Souza Melaré et al., 2017a, 2017b) (Urban & Nakada, 2021) (Vitorino de Souza Melaré et al., 2017b) (Fernando, 2019) (Bagolong, 2017)	Government's response on solid waste management in times of COVID-19 pandemic	A critical primary source of concern is the lack of regulation and poor management of solid waste produced in urban areas. Among the problems are proper waste generation, treatment, and recycling, focusing on long-term maintenance.
Revenue	9	(Lim, 2020) (Gamilla, 2021) (Davahli et al., 2020) (MORAN, 2021) (Wren-Lewis, 2020) (Ozili & Arun, 2020) (Corsetti & Marin, 2020) (Blanchard et al., 2015) (CAMBA & CAMBA Jr, 2020)	Challenges on COVID-19 to revenues in the gaming industry, hospitality industry, online food industry, stock market, and exchange rates	*Technology innovation plays a huge part in sustaining the food delivery industry by adapting to the growing demand of the consumer. * Small interventions with free and sophisticated capital markets can have only minor consequences.

The first core cluster is economic enterprise as the indicator of barangay governance performance, where in terms of the number of studies, four articles focused on the impact of the COVID-19 pandemic. As revealed in a survey by (Estadilla 2020), the government cannot hide that the economy will take a significant hit and fall in the coming quarters. Although President Duterte has a clear vision, ensuring that every Filipino is secure, and the entire nation will go through this stage with lesser damage. However, the administration's execution and recommendations seem

to be in disarray, with many issues occurring in barangays (villages) and even municipalities resulting from the Inter-agency Task Force's various and unprecedented decision implementations (IATF). Though it is a good thing that though the country's inflation rate remains stable (2.4 percent), constant supervision and a ready-to-use measure must be in effect. At a time when consumption is promoted, a rising price of essential commodities is a big no. That is why the government needs to ensure that suppliers would not take advantage of market maneuvering to compensate for recent losses once the pandemic subsides. However, in every ASEAN country, to help support local businesses and determine the sustainability of the region's economy, the need to contain COVID-19 must be the number one priority. A drastic short-term containment cost should be implemented even though it will falter the economic growth. These containment costs should cover all aspects of health, the economy, and society's well-being (Fauzi & Paiman, 2021).

In some other countries, the impact of COVID-19 on economic enterprise has affected micro, small, and medium enterprise (MSMEs). As (Shafi et al., 2020) studied, surveyed, and found that due to the COVID-19 outbreak and lockdowns, many micro, small, and medium enterprises have been severely affected. Consequently, these businesses are facing a variety of issues such as financial (67.93%), supply chain disruption (47.83%), decrease in demand (44.02%), reduction in sales and profit (38.04%, 41.85%, respectively). Therefore, it is vital to mitigate the ongoing crisis and the long-term effects caused due to COVID-19 or lockdowns. Similarly, (Affandi et al., 2020) hoped that the government would optimize the empowerment of MSMEs during the COVID-19 pandemic, with several alternatives through providing convenience in the capital, availability of raw materials, credit relaxation and restructuring for MSMEs, paying attention to computer technology infrastructure, and providing training to MSME players. It will impact the success of MSMEs to compete in facing competition in the global market during the current Covid-19 Pandemic.

The second core cluster is health program as the indicator of barangay governance performance, where in terms of the number of studies, ten articles focused on the challenges of public health crisis during the COVID-19 pandemic. Tabuga et al. (2020) mentioned that the unprecedented COVID-19 pandemic is the most challenging public health crisis the world has faced in a century. In the case of the Philippines, governance strategies must be enhanced to improve the overall performance in service delivery and build resilience against risks in the long term. This scenario demonstrates how the proper operation of the healthcare system is dependent on providing adequate support to the workforce. The governance of the health workforce is vital for understanding the workforce's role within the health system (Kuhlmann et al., 2018). If the government does not arm and prepare the population for emergencies, the system cannot respond when they occur, and the mechanism will fail (Lotta et al., 2021). This study indicates the possible costs that can be avoided through global cooperative investment in public health in all countries (McKibbin & Fernando, 2021). In this sense, governance seems to be a critical factor in times of crisis where the health workers must be handled and cared for (Kuhlmann et al., 2020).

It is important to note that at this stage of implementation, community health programs need strengthened leadership, local capacities, and resources for sustainability, in which community-

based systems play a more significant role in building resilience and strengthening primary health care, and communities are seen as participants in the healthcare system rather than just as recipients of healthcare programs (Simen-Kapeu et al., 2021). Hassan et al. (2017) stressed that community health planning must explicitly develop strategies and activities toward achieving health objectives. The planning approach needs enhanced cooperation, trust-building, resource sharing, and consensus-oriented decision-making among community members, stakeholders, and leaders (Panagiotoglou et al., 2018). This will result in a proper and holistic community epidemic preparedness and response plan (Schwartz & Yen, 2017). Thus, other essential health services must be identified and prioritized by the community (Cruz et al., 2020).

Solid waste management is the third core cluster as the indicator of barangay governance performance. Eight articles focused on the government's response to solid waste in times of the COVID-19 pandemic. As revealed, Solid Waste Management (SWM) is a public health service whose importance is often understated. When the solid waste management challenge is exacerbated by a public health emergency such as the Covid-19 pandemic, its real significance as an essential service becomes more apparent. This is because the governments and development agencies often overlook or ignore the status and needs of informal waste workers in political, economic, urban, and environmental planning policies (Nzeadibe & Ejike-Alieji, 2020).

The passing of Republic Act 9003 or the Ecological Solid Waste Management Act of 2000 was meant to ensure the public health and the environment while encouraging resource conservation and recovery and public cooperation and responsibility. Among its necessary provisions were the formal devolution of waste management to local levels, the forced closure of illegal dumpsites and investment in facilities, and the reduction and proper treatment of solid wastes (Domingo & Manejar, 2021). Although, it is also expected that municipal waste generated at homes will increase during the lockdown, quarantine while taking care of a sick family member or during the recovery period (World Health Organization and United Nations Children's Fund, 2020). A critical primary source of concern is the lack of regulation and poor management of solid waste produced in urban areas. Among the problems are proper waste generation, treatment, and recycling, focusing on long-term maintenance (Vitorino de Souza Melaré et al., 2017b).

Surprisingly, solid waste generation in major cities has decreased during social isolation, possibly because of reduced activity in commercial areas (Urban & Nakada, 2021). This challenge can be attributed to public attitude towards making source separation and recycling a habit (Vitorino de Souza Melaré et al., 2017b). Other challenges in solid waste management, as suggested by (Fernando 2019), are lack of vehicles, required instruments, and modern technology, a lack of a sound national plan with an integrated solid waste management program, an inadequate regulatory framework, low labor productivity, resident awareness, and political interference, despite high community participation. Thus, a massive information education campaign is necessary to both the community and the barangay leaders and other stakeholders (Bagolong, 2017).

The last core cluster is revenue as the indicator of barangay governance performance. In terms of the number of studies, nine articles focused on challenges on COVID-19 to revenues in the

gaming industry, hospitality industry, online food industry, stock market, and exchange rates. As revealed, the COVID-19 pandemic had made many businesses closed, thereby result in some unemployment. And two of the most significant declines in employment were in the entertainment, cultural, tourism, and hotel sectors, including significant declines in the employment of utilities– electricity, gas, water, ITC (Information and Communications) (Lim, 2020). Other affected businesses for closure are restaurants and fast-food chains. However, some only shut down their dine-in service but remains open for drive-thru and delivery services. The market for online food delivery services had tripled its revenue last year, and that technology innovation plays a huge part in sustaining the food delivery industry by adapting to the growing demand of consumers (Gamilla, 2021).

Given these challenges, the hospitality industry was also affected, resulting in revenue losses. (Davahli et al., 2020) suggested the need to develop sustainable industry, recovery, and resilience hospitality industry, consumer protection, illegal worker problems, business demand and the emergence of a new market, aggressive behavior against customers, and the dangers of resumption of operations pandemic. This is why the Philippine government is pressured to look for alternative revenue sources after some industries were affected by the pandemic, reducing tax collection for the government. This results in a scarce government fund that is badly needed to support its population. MORAN (2021) suggested that PAGCOR and the whole gaming industry can be an additional fund source for the government. It is in this industry as well where we can find a win-win-win scenario for all stakeholders.

Also, the COVID-19 pandemic has impacted stock markets and exchange rates. Wren-Lewis (2020) claims that the COVID-19 pandemic will significantly impact countries' GDP due to supply and market demand declines. Furthermore, if banks struggle to satisfy companies' financial needs due to declining demand, the capital markets across the world would crash. However, Ozili & Arun, (2020) found that restriction on internal movement and higher fiscal policy spending positively impacted economic activities, even though the growing number of reported COVID-19 cases had a little discernible impact on the degree of economic activity.

Similarly, the dissemination of COVID-19 has resulted in significant foreign exchange rates. The trend of foreign exchange rates, in particular, is accelerating, and capital outflows from emerging markets are significantly higher week on week compared to the previous 2007-2008 financial crisis (Corsetti & Marin, 2020). Blanchard et al. (2015) provided considerable evidence that sterilized foreign exchange intervention does have significant effects on exchange rates, especially in countries where cross-border capital mobility. Thus, small interventions between currencies of industrialized economies with free and sophisticated capital markets can have only minor consequences; evidence indicates that official acquisitions of currencies of emerging-market and developed economies frequently have more significant effects (CAMBA & CAMBA Jr, 2020).

## CONCLUSIONS

The review provides literature on Barangay governance performance during the COVID-19 pandemic in 2015-2021, focusing on economic enterprise, health programs, solid waste management, and revenue. This literature review answers the research question focused on the general characteristics of literature about Barangay governance performance during the COVID-19 pandemic posed in the Introduction. The answer to the research question provides the following conclusions. This topic represents a relatively new field of research, which has become very popular in the last years 2020- 2021 and has seen a substantial increase in the number of published scholarly journals. Most of the literature examines the impact, challenges, and responses of the governments to COVID-19 and how governance performance is affected.

There is a significant lack of scholarly journals dealing with the barangay governance performance, especially on economic enterprise, which makes it challenging to present a realistic situation with the scope of the study. However, most of the reviews are empirical studies and are mostly done on a country level or the ASEAN countries, and others; therefore, the results and findings are also bound to a specific national context and a specific local government framework and may vary country. The majority of sample scholarly journal articles use descriptive analysis, case study, a literature review, and other statistical tools.

For this reason, barangay governance performance requires a radical but short-term cost reduction strategy in order to sustain economic growth, improve health programs, reduce solid waste, and increase revenue. Therefore, the barangay officials play a crucial role in sustaining essential services despite the COVID-19 pandemic to have strong positive governance performance results. However, implications for future research regarding the role of private sectors in governance performance must be derived due to limitations of sample-related literature reviews.

## LITERATURE CITED

- Affandi, A., Sarwani, A. S., Erlangga, H., Siagian, A. O., Purwanto, A., Effendy, A. A., Sunarsi, D., Wicaksono, W., Suyatin, E. A., & Wahyitno, C. D. M. (2020). Optimization of MSMEs Empowerment in Facing Competition in the Global Market during the COVID-19 Pandemic Time. *Systematic Reviews in Pharmacy*, 11(11), 1506–1515.
- Aquino, I. P., Agustin, C. P., & Guadamor, M. L. P. (2017). Competencies of punong barangay for good governance: An assessment. *International Journal of Advanced Management and Social Science Research*, 6(5), 102–117.
- Åström, F., Danell, R., Larsen, B., & Schneider, J. (2009). *Celebrating Scholarly Communication Studies: A Festschrift for Olle Persson at his 60th Birthday*.
- Bagolong, S. P. (2017). Community Participation in the Implementation of the Ecological Solid Waste Management Act of 2000 (RA 9003) In Davao City. *The Journal of Management and Solid Waste Technology*, 43(4), 305–309.



- Bazm, S., Kalantar, S. M., & Mirzaei, M. (2016). Bibliometric mapping and clustering analysis of Iranian papers on reproductive medicine in Scopus database (2010-2014). *International Journal of Reproductive Biomedicine*, 14(6), 371.
- Blanchard, O., Adler, G., & de Carvalho Filho, I. (2015). *Can foreign exchange intervention stem exchange rate pressures from global capital flow shocks?* National Bureau of Economic Research.
- Boysillo, S. L. (2017). Governance of the Barangay Chairpersons in the Municipality of Ubay Bohol. *International Journal of Management and Business Studies*, 9(1), 50–63.
- Bruner, M. W., Eys, M. A., Beauchamp, M. R., & Côté, J. (2013). Examining the origins of team building in sport: A citation network and genealogical approach. *Group Dynamics: Theory, Research, and Practice*, 17(1), 30–42. <https://doi.org/10.1037/a0030114>
- CAMBA, A. L., & CAMBA Jr, A. C. (2020). The Effect of COVID-19 Pandemic on the Philippine Stock Exchange, Peso-Dollar Rate and Retail Price of Diesel. *The Journal of Asian Finance, Economics, and Business (JAFEB)*, 7(10), 543–553.
- Chen, L.-C., & Lien, Y.-H. (2011). Using author cocitation analysis to examine the intellectual structure of e-learning: A MIS perspective. *Scientometrics*, 89(3), 867–886.
- Corsetti, G., & Marin, E. (2020). The dollar and international capital flow in the COVID-19 crisis. *CEPR Policy Articles*.
- Cruz, M., Estepa-Garcia, K., Bautista, L. M., Lardizabal-Bunyi, J. E., Joves Jr, P. B., Abrogena, M. D. L. A. B., de Guzman, F. S., Espallardo, N. L., Riel-Espina, A. T., & Limpoco, A. G. O. (2020). Community-oriented health care during a COVID-19 epidemic: A consensus statement by the PAFP Task Force on COVID-19. *PAFP Community-Oriented Health Care during COVID-19 Epidemic*.
- Davahli, M. R., Karwowski, W., Sonmez, S., & Apostolopoulos, Y. (2020). The hospitality industry in light of the COVID-19 pandemic: Current issues and testing methodology, 17(20), 7366.
- Domingo, S. N., & Manejar, A. J. A. (2021). *An Analysis of Regulatory Policies on Solid Waste Management in the Philippines: Ways Forward*.
- Estadilla, L. S. (2020). The Economics of COVID-19 in the Philippines. *Eubios: Asian and International Bioethics Journal*, 30(9), 178.
- Fauzi, M. A., & Paiman, N. (2021). COVID-19 pandemic in Southeast Asia: intervention and mitigation efforts. *Asian Education and Development Studies*, 10(2), 176–184. <https://doi.org/10.1108/AEDS-04-2020-0064>
- Fernando, R. L. S. (2019). Local government solid waste management in Sri Lanka's Western Province: An implementation study. *Waste Management*, 84, 194–203. <https://doi.org/https://doi.org/10.1016/j.wasman.2018.11.030>
- Gabriel, A. G., Cabanatuan City, N. E., Antonio, P. M. A. B., Ecija, N., Ramos, P. V. B., & Marasigan, P. J. T. (2019). *Transparency and Accountability in Local Governance: The Philippines' Connection Between Democracy and Public Service Delivery*.
- Gamilla, C. O. (2021). Revenue boom of Online Food industry amidst Pandemic: Evidence from the Philippines. *International Journal of Progressive Research in Science and Engineering*, 2(4), 24–26.
- Hassan, O. B., Herman, K. M., Kryzanowski, C. D., & Faulkner, G. E. J. (2017). Active living in Saskatchewan: A review of official community plans. *Canadian Journal of Public Health*, 108(5), e551–e557.

- Jarneving, B. (2007). Complete graphs and bibliographic coupling: A test of the applicability of bibliographic coupling to identify cognitive cores on the field level. *Journal of Informetrics*, 1(4), 338–356.
- Kuhlmann, E., Batenburg, R., Wismar, M., Dussault, G., Maier, C. B., Glinos, I. A., Azzopardi-Muscat, N., Bond, C., Burau, V., Correia, T., Groenewegen, P. P., Hansen, J., Hunter, D. J., Khan, U., Kluge, H. H., Kroezen, M., Leone, C., Santric-Milicevic, M., Sermeus, W., & Ungureanu, M. (2018). A call to action for establishing a research strategy for developing Europe's future health workers. *Health Research Policy and Systems*, 16(1), 52. <https://doi.org/10.1186/s12961-018-0333-x>
- Kuhlmann, E., Dussault, G., & Wismar, M. (2020). Health labor markets and the 'human face of the health workforce: resilience beyond the COVID-19 pandemic. *The European Public Health Journal*, 30(Suppl 4), iv1.
- Lim, J. A. (2020). *The Philippine Economy During the COVID Pandemic*. Department of Economics, Ateneo de Manila University.
- Lotta, G., Fernandez, M., & Corrêa, M. (2021). The vulnerabilities of the Brazilian health workforce during health emergencies: Analysing personal feelings, access to resources and work dynamics during the COVID-19 pandemic. *The International Journal of Management and Health Planning*. <https://doi.org/http://dx.doi.org/10.1002/hpm.3117>
- McKibbin, W., & Fernando, R. (2021). The Global Macroeconomic Impacts of COVID-19: Seven Scenarios. *Asian Economic Papers*, 1–30. [https://doi.org/10.1162/asep\\_a\\_00796](https://doi.org/10.1162/asep_a_00796)
- Moore, S., Shiell, A., Hawe, P., & Haines, V. A. (2005). Translation of Social Capital into Public Health Research and Citation Practices: The Privilege of Communitarian Ideas. *American Public Health Journal*, 95(8), 1330–1337. <https://doi.org/10.2105/AJPH.2004.046094>
- MORAN, D. I. (2021). *A Win-Win-Win Scenario in The Gaming Industry Amidst the Pandemic: Evidence from The Philippines*.
- Nerur, S. P., Rasheed, A. A., & Natarajan, V. (2008). An author cocitation study of the strategic management field's conceptual framework. *Strategic Management Journal*, 29(3), 319–336.
- Nzeadibe, T. C., & Ejike-Alieji, A. U. P. (2020). Solid waste management during Covid-19 pandemic: policy gaps and prospects for inclusive waste governance in Nigeria. *Local Environment*, 25(7), 527–535. <https://doi.org/10.1080/13549839.2020.1782357>
- Olatokun, W. M., & Makinde, O. (2009). Citation analysis of doctoral works submitted to the Department of Animal Science, University of Ibadan, Nigeria. *Library Philosophy and Practice*, 1.
- Ozili, P. K., & Arun, T. (2020). COVID-19's Aftermath: Its Effect on the Global Economy (March 27, 2020). *Available at SSRN 3562570*.
- Panagiotoglou, D., Olding, M., Enns, B., Feaster, D. J., del Rio, C., Metsch, L. R., Granich, R. M., Strathdee, S. A., Marshall, B. D. L., & Golden, M. R. (2018). Building the case for decentralized HIV approaches systemic dynamics and health system capability in six US cities to resolve the HIV/AIDS epidemic *AIDS and Personality*, 22(9), 3071–3082.
- Petkovšek, V., Hrovatin, N., & Pevcin, P. (2021). Local Public Services Delivery Mechanisms: A Literature Review. *Lex Localis*, 19(1), 39–64. [https://doi.org/http://dx.doi.org/10.4335/19.1.39-64\(2021\)](https://doi.org/http://dx.doi.org/10.4335/19.1.39-64(2021))

- Pilkington, A. (2006). Bibexcel—Quick Start Guide to Bibliometrics and Citation Analysis. Lawrence, TB, Wickins, D., & Phillips, N.(1997). Managing legitimacy in ecotourism. *Tourism Management*, 18(5), 307–316.
- Porio, E., & Roque-Sarmiento, E. (2019). Barangay. *The Wiley Blackwell Encyclopedia of Regional and Urban Studies*, 1–5.
- Salami, M. O., & Olatokun, W. M. (2017). Citation Network Analysis of Science Doctoral Theses in the Faculty of Science, University of Ibadan. *Library Philosophy & Practice*.
- Schwartz, J., & Yen, M.-Y. (2017). Toward a collaborative model of pandemic preparedness and response: Taiwan's changing approach to pandemics. *Journal of Microbiology, Immunology and Infection*, 50(2), 125–132.
- Seuring, S., & Gold, S. (2012). Conducting content-analysis-based literature reviews in supply chain management. *Supply Chain Management: An International Journal*.
- Shafi, M., Liu, J., & Ren, W. (2020). Impact of COVID-19 pandemic on micro, small, and medium-sized Enterprises operating in Pakistan. *Research in Globalization*, 2, 100018. <https://doi.org/https://doi.org/10.1016/j.resglo.2020.100018>
- Simen-Kapeu, A., Lewycka, S., Ibe, O., Yeakpalah, A., Horace, J. M., Ehounou, G., Boima, T., & Wesseh, C. S. (2021). Strengthening Liberia's urban wellness initiative: Using a health system approach to guide program planning and help plan future shocks. *Journal of Global Health*, 11.
- Tabuga, A. D., Domingo, S. N., Diokno-Sicat, C. J., & Ulep, V. G. T. (2020). *Innovating Governance: Building Resilience against COVID-19 Pandemic and Other Risks*.
- Urban, R. C., & Nakada, L. Y. K. (2021). COVID-19 pandemic: Solid waste and environmental impacts in Brazil. *Science of The Total Environment*, 755, 142471. <https://doi.org/https://doi.org/10.1016/j.scitotenv.2020.142471>
- Vitorino de Souza Melaré, A., Montenegro González, S., Faceli, K., & Casadei, V. (2017a). A comprehensive analysis of technologies and decision support mechanisms to aid solid-waste management. *Waste Management*, 59, 567–584. <https://doi.org/https://doi.org/10.1016/j.wasman.2016.10.045>
- Vitorino de Souza Melaré, A., Montenegro González, S., Faceli, K., & Casadei, V. (2017b). Technologies and decision support systems to aid solid waste management: a systematic review. *Waste Management*, 59, 567–584. <https://doi.org/https://doi.org/10.1016/j.wasman.2016.10.045>
- Wallace, D. P., & van Fleet, C. J. (2012). *Knowledge into Action: Research and Evaluation in Library and Information Science: Research and Evaluation in Library and Information Science*. ABC-CLIO.
- White, H. D., & McCain, K. W. (1998). Visualizing a discipline: A study of author cocitations in information science from 1972 to 1995. *American Journal of Society for Information Science*, 49(4), 327–355.
- World Health Organization and United Nations Children's Fund. (2020). *Water, sanitation, hygiene, and waste management for SARS-CoV-2, the virus that causes COVID-19: Interim guidance-2*. <https://www.who.int/news-room/fact->
- Wren-Lewis, S. (2020). The economic effects of a pandemic. *Economics in the Time of COVID-19*, 109–112.

Zhao, D., & Strotmann, A. (2008). Author bibliographic coupling: Another approach to citation-based author knowledge network analysis. *Proceedings of the American Society for Technology and Information Science*, 45(1), 1–10.