Crowd Legislation in Post-Pandemic Era: Overview, Challenges, and Opportunities for Participatory Democracy's Future

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Abstract—**This study will examine the constraints and prospects for using crowd law to promote post-pandemic participatory democracy. Digital platforms have made it possible to involve many people more effectively and efficiently in decision-making processes, or even influence law-making to make it more representative and meaningful. In an open government era, the crowdsourcing approach expands public participation in governance. Crowdsourcing platforms make it possible for anyone to participate online in gathering information and ideas for wider public solutions. This is an effort to address more complex issues in a variety of fields, including advancing the creation of transformative legislation solutions. Covid-19's spread has accelerated the digitization of public life. The pandemic has become a game-changer for public policy and government administration. This study examines scientific papers using the Dimensions.ai research information system from Digital Science. With 98 articles between 2021 and 2023, dimension.ai bibliographic analysis shows that scholarly interest in mass legislation, post-pandemic, and participatory democracy has increased. Human society, legal studies and law, language, communication, and culture, and business, management, and tourism dominate mass legislation, post-pandemic, and participatory democracy study. According to article origin, the US and England contribute the most with 30 articles each. Then China and Germany rank second and third. Europe dominates the continents over Asia and America. Visualizing the co-authorship network indicates a correlation between crowd legislation, post-pandemic, and participatory democracy scholars. Crowdsourcing policies and laws can improve inclusivity, openness, accountability, dialogue, and community empowerment. Through crowdsourcing, the legislative process increases public participation and crowd capital by improving knowledge, access to new ideas, and public commitment. ideally it helps build more participatory policy making and improve democracy and products of law.**

Keywords—**crowd legislation, digital platforms, lawmaking process, digital divide, the AI channel**

I. INTRODUCTION

Communication and information technologies are revolutionizing politics, governance, lawmaking, and public decision-making, as they are transforming every other aspect in human life [1][2][3]. Digital platforms have made it possible to engage a broader spectrum of people in decision-making processes in a more effective and efficient manner, and even to influence lawmaking to make it more representative and meaningful.

Bottom-up data collecting and data sharing via peer-to-peer technologies have been made possible through the Internet, public ICTs, or and open-source software, while websites have assisted policymakers and the general public in communicating more openly. Web 2.0 and high-bandwidth storage make governance democratization easier. Crowdsourcing tools and processes (for example, smartphone software, blogs, wikis, social bookmarking apps, social networks, and peer-to-peer software) evolved into web-based problem-solving tools through enlisting large groups of users to perform functions such as real-time broad communication, big data collection and analysis, co-design, and so on [4]. Then, crowdsourcing platforms enable everyone to contribute information and concepts for broader public solutions online.

Globally, national, and local governments are progressively using crowdsourcing into their open government policies. Crowdsourcing may contribute to deliberative democracies promote public debate and equitable representation [5]. Epistemic deliberative democrats emphasize democratic deliberation's knowledge-aggregating and truth-tracking abilities; therefore, crowdsourcing may help them. This implies that all affected interests are treated fairly at institutions that are more likely to enact better laws, policies, and decisions. [6]. Crowdsourcing brings the people's expertise and voice to the public. Participatory democracies can finally use crowdsourcing. Furthermore, Covid-19 has increased public life digitization. The outbreak has changed public policy and administration.

The article attempts to expand on the concept of crowd legislation in a post-pandemic setting. The pandemic's impacts have had a significant impact on many aspects of public life, including the future of democracy and public sector administration. We attempt to review the concept of crowd legislation to see how the picture, challenges, and opportunities associated with enhancing participatory democracy post-pandemic have changed.

This paper is organized as follows. First, we create a Bibliometric analysis of crowd legislation following a Pandemic using Dimensions.ai data. Then we delve deeper into the notion and general application of crowd legislation. Finally, we draw out the discourse on the threat of a pandemic to democracy and how crowd legislation can be an option in reinforcing society's role in adjusting unbalanced executive-legislative interactions during the pandemic.

II. RESEARCH METHOD

This section explains how the dataset of crowd legislation articles was gathered. Dimensions.ai is a research information system created by Digital Science (https://www.dimensions.ai). Dimensions, which was released in January 2018, integrates over 133 million research articles from all stages of the research journey and allows users to access 95 million+ publication records and their metrics for freely [7]. Dimensions aspires to be "a cutting-edge and creative infrastructure and linked research data tool" that uses new technologies to dissolve through data silos.

Since its launch, scant scientific literature has studied this database. Thelwall (2018c) examined a random sample of 10,000 Scopus articles from 2012 and found that Dimensions covered 97% of DOI-containing publications [8]. Visser et al. (2020) discovered that Dimensions provided considerably greater coverage than Scopus and WoS, which relied mainly on CrossRef data [9]. Overall, Dimensions' trial edition gives the whole context of all indexed papers in one location, and the database's analytics, technology, and feature will be based on the needs of academia.

There are four separate parts to the Dimensions home screen: the search box, the results page, the filters, and the analytical reports. For a question, the software gives it plenty of information about how many documents are in the database and for each author, source, type of document, and so on. Once the user has done a search, it can narrow down their search by year, expert, knowledge area, type of publication, and open access publications. Author, source, and field of knowledge filters let users conduct more in-depth searches from their own search box and suggest suggestions to sort by things that show up more often in search results.

The query parameters are: Crowd legislation, post-pandemic, and participatory democracy for free text in the entire data query; 2021–2023 time frame; ANZSRC 2020 field of study focusing on human society, political science, law and legal studies, policy and administration; and "article" or "proceeding" publications.

III. FINDINGS AND DISCUSSION

Crowd legislation after Pandemic: A Bibliometric Results from Dimensions.ai database

This section provides a descriptive analysis of the retrieved data. Figure 1 shows that interest in crowd legislation, post-pandemic, and participatory democracy has clearly increased during the studied time, with 98 publications published between 2021 and 2023. However, interest in the study of crowd legislation has fluctuated, growing between 2021 and 2022 and tending to diminish when this research is being taken.

In figure 1, the research categories of human society, law and legal studies, language, communication and culture, and business, management, and tourism dominate talks on crowd legislation, post-pandemic, and participatory democracy. Dimensions' list of FOR is based on the Australian and New Zealand Standard Research Classification (ANZSRC). The topic of crowd legislation can be observed to lie on three (three) different discussion axes in considering this graphical representation. These axes include society, the legal process, and the communication model.
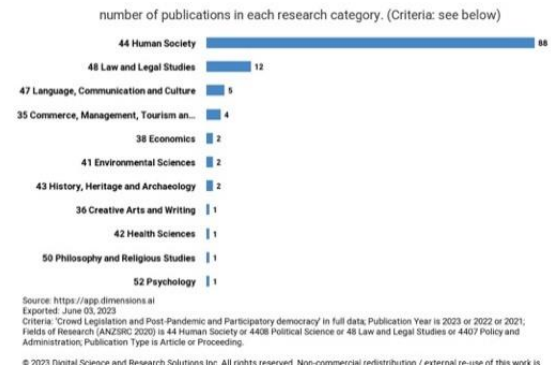

Figure 1. Number of papers by field of research

In examining the article's country of origin, figure 2 reveals that the United States and the United Kingdom are the countries that contribute the most with 30 articles each. Then China and Germany came in second and third, respectively. In comparison to Asia and the America, Europe dominates the continent category.
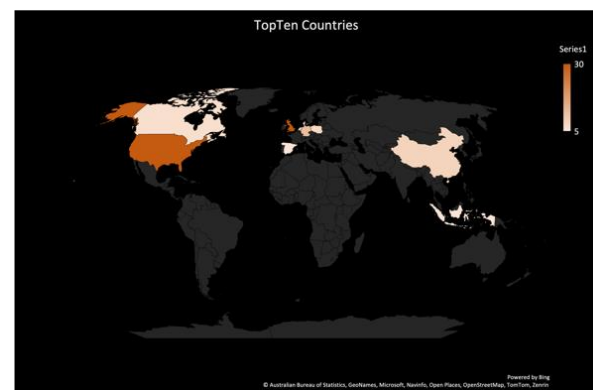

Figure 2. Top 10 Countries and the Numbers of Papers Published During the Period

In figure 4, the network visualization of co-authorship can be recognized by the presence of nodes (circles) representing researchers, and edges (networks) as an illustration of the relationship between researchers. The set of nodes with edges explains that there is a correlation or relationship between researchers involved in crowd legislation, Post-Pandemic, and participatory democracy-related research. Bibliometric analysis of researchers or authors concentrated on Candice C. Howarth, a researcher at the London School of Economics and Political Science who is actively engaged in climate policy making research. The network demonstrates the existence of a relationship or collaboration between researchers, such as the network (edge) connecting Candice C Howarth to eight other authors, including John R Barret, Rebecca Wells, Jonat Norman, Alice Mary Garvey, Lina Isabel Brand Correa, and Milena Mareika Buchs.

Figure 3. Researchers Network based on Co-Authorship Analysis and Citation Analysis

Crowd Legislation after Pandemic: Concept and Practices

The findings of scanning journal articles on the dimension.ai database, which were then mapped with vosviewer using density visualization mode, as shown in figure 5, demonstrate that study on crowd legislation in the post-pandemic period is related to the issues: democratic participation, social inclusion, youth activism, social media, and digital participation. Six articles in the dimension.ai dataset focus mostly on the topic of democratic participation.
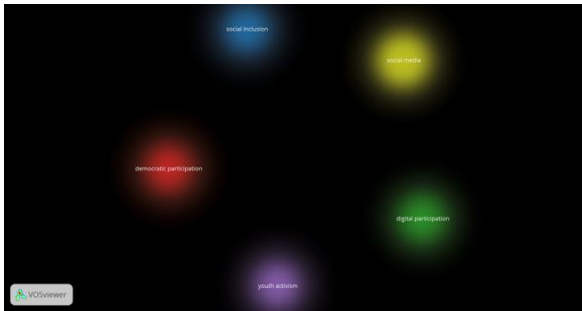

Figure 4. Journal findings mapping with Density Visualization Mode

Feddersen and Santana (2021) conduct conceptual research on democratic involvement in the context of crowdlaw activities in their work titled Unpacking the democratic affordances of crowdlaw idea and practice: 'It's like being a part of the game,' says one [1]. They examine democracy as a conceptual construct that combines decision-making methods, procedures based on the equal participation of citizens, and a forum for different forces and interest groups to compete for power over decisions that produce legitimate outcomes when these decisions are the result of a free and reasoned debate among equals.

Furthermore, the participatory deliberative democratic model also matches crowdlaw literature's ideas. Crowdlaw requires people to participate in any stage of lawmaking. This crowdsourced exercise is based on a tech-based experience within a government or parliament that includes lack of control over some parts that create policies or laws.

Then, in the article "young Political Participation, Good Governance, and Social Inclusion in Nigeria: Evidence from Nairaland", Shola (2021) focuses on young political participation in specifically. This study also shows that people in many countries have stopped being involved in politics since the turn of the century. In general, young people are less politically active than the rest of the population. However, there is another view that says, even though they don't seem interested in formal political activities, young people are drawn to and often participate in inside-out, informal, and alternative ways of being politically active. So, it is very important to make sure that having young people

lead growth is by far the least used and least appreciated method in democratic nations.

Hence, in Corporal and Cognizant Barriers to Voting: the Impact of COVID-19 on the 2020 Election Season in St. Louis, Parker and Hutti (2022) analyze democratic participation in elections during the COVID-19 pandemic. Looking at the pandemic itself, it has been demonstrated to have had an impact on diminishing democratic engagement, particularly among persons with lower socioeconomic standing [10]. Low poverty-impacted voter turnout perpetuates government policies and financing decisions that affect people of color in poverty. Low-income voters are less likely to vote or be politically educated than high-income voters, limiting their influence and creating an upper-income tilt to effective public opinion.

In another article, Macaulay et al.'s research on Integrating citizen engagement into evidence-informed health policy-making in Eastern Europe and Central Asia: scoping study and future research priorities discusses the importance of public involvement in health policy-making in depth [11]. According to Macaulay et al. (2022), citizen opinions are an essential and frequently underappreciated source of evidence for shaping health policy. However, there is a lack of information on how citizen participation may be included into evidence-informed health policy-making in low- and middle-income countries (LMICs) and newly democratic states (NDSs), despite increased encouragement for its implementation. This study showed no reason why LMICs and NDSs couldn't engage citizens like high-income western democracies. However, some political circumstances may necessitate subnational trailing procedures to create and implement public participation. This study highlights the potential for citizen participation and the need for more research on its implementation.

Moreover, Btzlaff (2022) reveals additional fascinating information on participation and democracy in his piece titled "Consenting Participation? How Demands for Citizen Participation and Expert-Led Decision-Making Are Reconciled in Local Democracy Political". Btzlaff (2022) notes that democratic advances have met increased citizen participation expectations [12]. However, rising aspirations for democratization have been coupled by rising cynicism and uncertainty about representative democracies' policy competence. This article examines modern democratic ambivalence and tracks citizen engagement. It illustrates that experts still set the participation agenda. Top-down decisions determined citizen empowerment, participation, and questioning. Participation may plan and legitimize democracy. The way people think about their participation in democracy is significant and important, in part because people want to know the answers. But a lot of people in the area want politics and lawmakers to "deliver" and "do their jobs," and people often believe that planning from the top down is better for the people. This conclusion is backed by the fact that democracy is overloaded and people expect politicians to do their jobs. Even though there is a public commitment to democratic participation, the study shows that different settings handle participation in different ways. It also shows that citizens, city planners, and the administration all expect a democratically hidden but controlled management process to make better policy decisions.

Table 1: Understanding of Democratic Participation

Approach	Goal	Legitimation Sources	Hierarchy	Participation Challenging Power
Liberal Democratic	Political Equality; Accountability of Representatives	Input & Throughput Legitimacy	Bottom-up & Top-down	Limited
Theory Participatory Democracy	Political Culture; Individual Self-Efficacy	Input Legitimacy	Bottom-up > Top-down	Yes
Deliberative Democracy	Public Consent; Epistemic Quality of Decisions	Input & Throughput Legitimacy	Bottom-up > Top-down	Yes
Policy Analysis, Governance	Responsiveness	Throughput & Output Legitimacy	Top-down > Bottom-up	No
Simulative Democracy	Reconcile Outcome Effectiveness and Participatory Demands	(Throughput &) Output Legitimacy Hierarchy	Top-down > Bottom-up	No

Source: Butzlaff (2022) [12]

The following study cluster on crowd legislation in the dimension.ai database relies extensively on digital participation. Serdült, Fofmann, and Vayenas (2022) examined how digital political participation is rapidly supplementing traditional forms of political participation. In the COVID-19 pandemic, Serdült, Fofmann, and Vayenas (2022) found that discourse, consultation, participation, and voting had been digitally enhanced [13]. They represent the new digital experiences of ever-wider segments of the population, and digital participation in politics will become increasingly significant. The DigiPart-Index (DPI), created by Serdült, Fofmann, and Vayenas, analyzes three dimensions of digital political participation in all Swiss cantons. In democracies, opinion-formation precedes political decision-making. E-deliberation, political education, and transparency tools are included. Co-creation tracks government-civil society interactions. This poll examined e-consultation and e-demand. Thirdly, digital tools can facilitate voting, public debate, and state-society dialogue. To enable e-voting and e-collecting, e-IDs must be established.

The use of Digital Public Participation Tools is also discussed in Areej Kiwan's, Sherief Sheta's, and Mina Michel's paper on the Challenges and Opportunities of Applying Digital Public Participation Tools in Egyptian Urban Development Projects [14]. This article, which was written in 2021, looks at what is happening in urban Egypt in terms of rapid social and informal-urban growth, which causes a lot of problems in both urban and rural settlements. One of the reasons for this is the lack of coordination between stakeholders and real public participation. Urban planning and development initiatives have used multiple participation models with varied levels and types of public participation as a global phenomenon. When public engagement is mandatory, the debate is how to use ICTs and cellphones to ensure inclusion. Most activities during the COVID-19 pandemic are online. This transformation has necessitated fully digital public involvement, which complements the government's digitalization strategy. In this way, the study shows the way for using digital public involvement in urban development projects that reflect the public's needs and preferences, take advantage of the new technologies, and take precautions and social distance in the days of covid-19 into account. The paper

also examines current online public engagement tools, especially in Egypt, to demonstrate the benefits and drawbacks of digital public participation and offer implementation guidelines based on successful case studies and local context.

Social media has grown significantly as part of digital engagement. "Cooperative planning using social media: A typology of support functions and challenges" by Yanliu Lin (2020) describes social media as a channel for one-way information flows from government to citizens or from individuals and organizations to a wide audience in real time[15]. People and organizations collaborate globally through this social networking. Power and participation have expanded with connectivity. Multi-modal, interactive, mass self-communication, and digital public domains characterize social media. These support services help multiscale collaborative planning. Social media and digital tools have enhanced connectivity and communication between individuals, civil society, government, and planning actors.

The study also covers bias, self-censorship, and opinion polarization in social media-based collaborative planning. Deep social interaction and dialogue may be lacking. Wider engagement "materializes" when online and offline interaction methods create virtual linkages. Social media, other participatory tools, and offline methods must be blended for inclusive collaboration. No single response fits all institutional structures and socio-economic concerns. These differences may require different participative methods.

Discussion

Crowdsourcing is currently a common instrument to strengthen democracy and involve citizens in policymaking. Iceland is one of the countries that has started writing rules with help from the public. Whereas in 2011, the Icelandic Constitutional Council used crowdsourcing to help write the constitution by letting people speak freely on drafts of the constitution that were posted regularly on a website and a Facebook page.

Then in Finland, the Ministry of the Environment and the Committee for the Future of the Finnish Parliament crowdsourced an off-road driving regulation. The Crowdsourced report Off-road Traffic Law Experiment in Finland describes Finland's actions [16].

The first phase began in January 2013 and ended in March 2013. Part 2 spanned April–June 2013. Users can publish ideas, comment on them, and vote for or against others' ideas. Everyone may watch crowd comments online. Before posting, suggesting, or voting, users must register. They might remain anonymous, use their true name, or create an informal title. Registration required a checkable email address.

On the website, anyone can start and sign policy petitions. Finnish legislation requires the parliament or cabinet to discuss a petition with at least 50,000 marks in six months. Off-road traffic law reform was two-step. First, participants used www.suomijoukkoistaa.fi to map out problems, share ideas, knowledge, and information.

Users could vote, remark, publish photographs and other attachments, and tag their thoughts and comments with gathered and publicly available key words. By submitting ideas, commenting, and voting, users earned points that the website translated into badges. A user activity stream on the site shows how and who discusses ideas. Private

conversations, keyword tagging, automatic searches for comparable ideas, tabs for popular, recent, or topic-based ideas, and more are available. With a multi-language system in the crowdsourcing software, every user content was automatically translated into English and Swedish. Google Chrome automatically converts content into English. Additionally, www.maastoliikennelaki.fi was created to educate people about off-road travel and its laws. The webpage covered the present law and the passed bill. (See the next chapter for more on the passed measure.) There was also off-road traffic research.

This project, called the "Finnish Experiment," was able to get different ideas and points of view from the people about off-road traffic. These ideas and points of view can be taken into account when making laws. In the spring of 2013, a website called www.suomijoukkoistaa.fi was used by a lot of Finns to share a lot of thoughts. Then, hundreds of people who were interested in the program used a tool called CrowdConsensus/Joukkoarvio to rate these ideas.

Initial crowdsourcing was limited to 10 priority regions by the Ministry of Environment. Wide-ranging issues include off-road traffic. Others are more particular, like off-road traffic age limits, emissions, and route layout. In "Propose your own topic," people might offer a topic not on the list but that interests them. Most were off-road traffic reform items recommended by the Ministry of the Environment.

Over 340 ideas and conversation starters, 2,600 comments, and 19,000 up/down votes from 700 individuals were submitted in the first half. Next, participant input was examined. Groups of suggestions and comments were used to plan the second stage.

Finns are interested in off-road traffic and its laws, as seen by the number of participants. There was much discussion. Many links were given about Finland and other nations' off-road driving laws. They discuss off-road traffic crashes, safety, and other issues nationwide. Despite initially identifying 10 problem areas, participants' off-road traffic concerns expanded. The search for information covered "an unlimited, undefined" crowd, not just interest groups and other stakeholders. The first stage is mapping the problem and determining what non-experts require. Participant concerns included off-road traffic safety, illegal riding, lack of routes or trails, noise pollution, environmental damage, disparities in law enforcement across Finland, and a lack of information and awareness about current legislation.

Participants' comments was analyzed and summed up for problems and solutions. The "challenge areas" grew. Then, these problem areas were used to generate suggestions in the second round of crowdsourcing. Participants's contributions were examined to identify problems and propose solutions. Then, the larger 'challenge areas' were homed in on. In the second phase of crowdsourcing, as detailed in the following chapter, these areas of difficulty served as a basis for idea generation.

The first phase of online moderation was light. Moderators asked follow-up questions and clarified. To avoid insulting other participants, offensive comments were removed. The conversation was mostly courteous and constructive, therefore removing comments was unnecessary. About 10 comments were removed for content or tone issues. The user interviews and platform feedback conducted by the authors revealed that participants desired more structure in the conversations, i.e.,

more distinct problem areas. Consequently, the second segment was more organized.

The first phase identified issues, while the second phase required participants to suggest solutions. The highlighted issues were routes, monitoring, safety, regulations and rights, nature and environment, information gathering and use, and improvement of the lawmaking process through crowdsourcing. These expansive categories were subdivided into more specific subject areas with issue-specific inquiries. The phase of generating ideas concluded in June 2013, with 170 ideas, 1,300 remarks, and 6,000 votes cast by 730 registered participants.

The seventh lessons were derived from the case study of Finland's crowdsourcing laws and regulations. The first relates to engagement. Given the opportunity, many individuals are anxious to participate. They must be concerned with this potential. Engagement must be credible. The crowd's expectations are optimistic but realistic. Them are aware that a single thought or opinion may not matter. Hundreds of different points of view must be heard, and the law will be a compromise. Uncaring individuals should not be disappointed or have their opinions disregarded. It care, so despite their pessimism, the volunteer on the crowdsourcing website. The case study of Finland crowdsourcing laws and regulations yielded 7 lessons. The first concerns involvement. When given the chance, many people are eager to engage. They must care about that potential. It must be plausible that their engagement will lead to something.

Second, public expectations are hopeful but realistic. Publik no one thought or opinion may not matter. Hundreds of different points of view must be heard, and the law will be a compromise. People should not be disappointed or have their ideas ignored just because they do not care. People are concerned, so they overcome their cynicism and volunteer on the crowdsourcing site.

Learning processes are third. Participants learned from each other while they debated on the crowdsourcing platform. Exposure to others' perspectives didn't influence ideas, but it helped participants grasp others' viewpoints and circumstances, even opposing opinions. Cross-cutting exposure occurred when environmentalists evaluated suggestions to enhance off-road traffic and vice versa. Future study should focus on education. Study learning triggers and how to improve them in future crowdsourcing projects.

The fourth lesson covers knowledge sources. Participatory policymaking strategies that self-select participants risk misrepresenting the public's preferences. The crowdsourcing participants are usually self-selected and not statistically representative of the public. Crowdsourcing platforms also allow anonymous participation; thus, the same persons may contribute several times using different profiles.

The fifth lesson is collective intelligence. A variety of different and innovative ideas, concepts, and thoughts create color variations and breakthroughs in creating the greatest public arrangements.

The sixth lesson is to record minority voices. Through input clustering, minority ideas among the majority can be considered in formulation. Policymakers' responses are the final lesson. Decision makers should include crowdsourced feedback like interest groups and hired specialists.

From this actual reality, crowdsourcing for policy and law formation is still a new phenomenon that offers a viable alternative to less transparent and less participatory traditional approaches[17]. To address these discourse, a novel idea, strategy, and methodology known as crowdlaw have arisen, all of which can be traced back [18]. Thus, global technologists, politicians, activists, civil officials, political philosophers, political scientists, and attorneys are studying and supporting such new ways.

Crowdsourcing-based legislation and policymaking involves online public participation using new technologies to tap into diverse sources of information, judgments, and expertise at each stage of the law and policymaking cycle to improve the quality and legitimacy of the resulting legislation and policies [2]. Crowdsourced policymaking lets citizens brainstorm and discuss policies and legislation online before they are decided by local governments or national parliaments [19]. Citizens, or the crowd, are invited to express their opinions and information about a policy, as well as the laws that support it.

Law and policymaking must become more adaptable, adaptive, and agile. There are five design principles that must be recognized to implement the crowdsourcing framework in the policy or lawmaking process [19]. The first is an essential democratic principle: inclusiveness. The second, accountability, is a requirement for political legitimacy. Transparency, the third component of democratic legitimacy, has recently been reemphasized as a means of ensuring accountability. The last two principles, modularity, and synthesis are more pragmatic concepts that are useful in attaining the aims of efficient knowledge search and democratic discourse, as well as in supporting the ideals of inclusivity, transparency, and accountability more broadly. They are based on the experience of planning and implementing Finland's crowdsourced law-making reform.

The five design concepts link and increase policy process engagement. Design principles appear in layers and sequences in policymaking, as described below: First, inclusive processes and platforms are more likely through transparency. Understanding what involvement entails and what they get may inspire participants. Transparency also boosts confidence in influence. This may increase participation. Second, transparency makes it easier for the population to demand responsibility and harder for authority to oppose closing the accountability loop. Third, vertical transparency makes it easier for citizens to enforce responsibility when needed. Horizontal transparency also helps the crowd enforce by allowing participants to band together and pressure authorities for responses. Thus, platform horizontal and vertical communication encourages responsibility. Fourth, modularity and synthesis affect accountability. Technology-enabled modularization allows authorities to close accountability loops. Better synthesis can explain authorities' decisions and show the crowd's input. Stronger synthesis makes it easy for the crowd to discern if their preferences were reported and assimilated. If authorities don't defend their decisions, the audience may demand accountability. Fifth, modular processes and technology are more inclusive since there are various entry points. Sixth, improved synthesis increases transparency by consistently and efficiently communicating information to the community. Seventh, superior synthesis moments allow the audience to assess whether their wishes were met. If officials don't explain their decisions, they might demand responsibility.

Meanwhile, the epidemic allows the public to track governments' actions. The lockdown has given everyone more opportunity to observe the current conditions. In the face of population mobility constraints, the daily use of digital devices and social media is the main way of communication. This contradictory situation is interpreted as a symptom of the deterioration of democracy that occurred earlier than the Covid-19 pandemic and has since evolved into a more severe and widespread situation.

This moment of health crisis should be utilized to consolidate and unite the nation's resources to confront emergencies as a unit. Increasing government and public understanding and literacy about digital devices should be a big step toward increasing public involvement and participation through social media. Limitations in public engagement that previously existed owing to limited access, opportunity, and habits can begin to be changed because of the pandemic's new habits of connecting online.

Studies have called the COVID-19 pandemic a game changer in many fields [26][27][28]. The impetus for this transformation should provide policymakers with an opportunity to improve governance and regulatory systems. This context includes the use of crowdsourcing to increase public engagement using information technology advancements.

IV. CONCLUSION

The COVID-19 pandemic indicates that the public sector encounters basic, complex, and chaotic challenges with unexpected, unpredictable, and uncertain events. Policymaking may also be affected by the pandemic. Thus, the immediate and long-term repercussions of the COVID-19 pandemic on democracies under analysis may differ. In summary, sustainable governance systems must be flexible, nimble, and pragmatic to survive continual disruptions.

Post-pandemic must be a time for bolstering public participation as a crucial component of a more accountable and legitimate democracy. Efforts to enhance public participation can be conducted through the application of ICT within a crowdsourcing framework. By incorporating crowdsourcing into the policy or law-making process, citizens can play a more active role in the mechanism of government.

Crowdsourcing increases inclusiveness, openness, accountability, discussion, and civic empowerment in policymaking by offering access to the experience and expertise of massive, distributed crowds, created via peer- and expert-learning. Hence Crowdsourcing constructed crowd capital through improving knowledge search, access to new ideas, and public commitment. These value creation points help assess crowd-sourced policymaking value.

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