**Research Article** 

# Social Media and Political Polarization: Investigating the Role of Online Platforms in Shaping Public Opinion

#### Dr Mohammad Afsar Alam

Assistant Professor, Fiji National University College of Humanities and Education School of Arts and Humanities, Fiji Email: <u>mohammad.alam@fnu.ac.fi</u>

**Abstract:** The rapid rise of social media platforms has profoundly influenced public discourse, contributing both positively and negatively to the political landscape. This paper investigates the role of social media in shaping political polarization, focusing on how algorithms, and selective exposure mechanisms intensify ideological divisions. Through an examination of recent case studies, such as the 2016 U.S. Presidential Election and the Brexit referendum, the research highlights the complex interplay between social media dynamics and political polarization. While social media has democratized information sharing and enabled broader participation in political discussions, it has also facilitated the spread of misinformation and the entrenchment of extreme viewpoints. The paper also explores counterarguments that challenge the narrative of social media as the primary driver of polarization, suggesting that traditional media and broader socio-political factors may also play significant roles. To address the polarizing effects of social media, the study underscores the need for regulatory measures that promote algorithmic transparency, content diversity, and media literacy. The findings offer critical insights into the challenges and opportunities presented by social media in the context of democratic processes and public opinion formation.

**Keywords:** Political Polarization, Social Media Algorithms, Public Opinion, Misinformation, Mitigating Factors.

**How to cite this article:** Alam A M, Social Media and Political Polarization: Investigating the Role of Online Platforms in Shaping Public Opinion. **Research Journal of Humanities and Social Sciences. 2024;3(4):23-31.** 

Source of support: Nil.

**Conflict of interest: None** 

Received: **13-07-2024** Revised: **20-07-2024** Accepted: **07-08-2024** Published: **24-08-2024** 



**Copyright:** © 2024 by the authors. Submitted for possible open access publication under the terms and conditions of the Creative Commons Attribution (CC BY) license (https://creativecommons.org/license s/by/4.0/).

#### 1. Introduction

Over the past decade, social media has transformed from a niche online activity into a global phenomenon that has reshaped how people communicate, share information, and engage with the world around them. Platforms such as Facebook, Twitter, Instagram, and YouTube have become integral parts of daily life, with billions of users worldwide. Facebook, for example, reported having 2.8 billion monthly active users as of 2021, making it the largest social media platform globally (Statista, 2021). This explosive growth is attributed to the increasing accessibility of the internet and mobile devices, which has enabled more people to connect and interact online than ever before (Pew Research Center, 2021). Social media's influence extends beyond social interactions, profoundly affecting politics, culture, and even economies. These platforms have democratized information dissemination, allowing anyone with internet access to contribute to public discourse and share their views on a global scale (Ellison & Vitak, 2015). However, this democratization has also led to the spread of misinformation, the rise of echo chambers, and the amplification of extreme views, which have contributed to increased political polarization (Sunstein, 2017).



Political polarization refers to the growing ideological distance and hostility between different political groups, leading to a divided society where consensus and compromise become increasingly difficult (McCoy, Rahman, & Somer, 2018). While political polarization has long been a feature of democratic societies, it has intensified in recent years, becoming a global phenomenon that affects not only established democracies like the United States and the United Kingdom but also emerging democracies and authoritarian regimes (Carothers & O'Donohue, 2019). The rise of social media is often cited as a significant factor contributing to this polarization. Social media platforms, with their algorithms designed to maximize user engagement, often promote content that reinforces users' pre-existing beliefs and biases, leading to the formation of echo chambers where opposing viewpoints are rarely encountered (Pariser, 2011). This selective exposure to information exacerbates polarization by creating an environment where individuals are increasingly isolated from differing perspectives, fostering division and reducing the likelihood of meaningful dialogue (Benkler, Faris, & Roberts, 2018). In an era where digital connectivity shapes much of our daily lives, social media platforms have become powerful tools for communication, information sharing, and public discourse. However, alongside these benefits, concerns have arisen about the role these platforms play in deepening political divides. This paper aims to investigate the extent to which social media contributes to political polarization by shaping public opinion. Specifically, the study will explore the mechanisms through which social media algorithms, echo chambers, and selective exposure influence users' political beliefs, ultimately intensifying ideological divisions. By examining these dynamics, the paper seeks to provide a comprehensive understanding of social media's impact on political polarization and offer insights into potential strategies for mitigating its effects.

#### **Research Problem**

The rapid proliferation of social media platforms has significantly altered the landscape of public discourse, offering unprecedented opportunities for individuals to express their opinions and engage in political discussions. However, this democratization of communication has also introduced new challenges, particularly in the form of increased political polarization. The core issue lies in the way social media platforms operate, utilizing algorithms designed to maximize user engagement. These algorithms often prioritize content that aligns with users' pre-existing beliefs, leading to the creation of echo chambers where diverse perspectives are seldom encountered. As a result, users are more likely to be exposed to homogenous viewpoints, which can reinforce their existing biases and contribute to a growing ideological divide. This polarization is not only evident in online interactions but also manifests in offline behaviors, such as voting patterns and civic engagement. Despite the growing concern over social media's role in exacerbating political polarization, there is a lack of comprehensive research that thoroughly investigates the specific mechanisms through which these platforms influence public opinion and contribute to this divide. Understanding the nuances of this relationship is crucial for developing strategies to address the negative impacts of social media on political discourse and for fostering a more informed and balanced public sphere.

#### **Research Questions**

How do social media platforms contribute to political polarization?

What mechanisms on these platforms amplify or mitigate polarization?

#### Scope and significance of the study

This research paper will explore the intricate relationship between social media and political polarization, focusing on how online platforms shape public opinion and contribute to ideological divides. The scope of the study encompasses an analysis of the key mechanisms through which social media influences political beliefs, including algorithms, echo chambers, and selective exposure. By examining multiple social media platforms, such as Facebook, Twitter, and YouTube, the research aims to identify common patterns and platform-specific differences in their impact on polarization. The study will also investigate how these online dynamics translate into offline behaviors, such as voting patterns and civic engagement, providing a comprehensive understanding of the broader implications of social media on political discourse. The significance of this research lies in its potential to contribute to the growing body of knowledge on the social implications of digital technologies. In a time when political polarization is increasingly recognized as a threat to democratic processes and social cohesion, understanding the role of social media is crucial. This study not only aims to shed light on the underlying mechanisms that drive polarization but also seeks to inform policy discussions and platform interventions aimed at mitigating these effects. By providing insights into how social media can both exacerbate and potentially alleviate political polarization, the research holds relevance for policymakers, social media companies, and the general public alike.

#### 2. Literature Review

#### **Theories of Political Polarization**

Political polarization has been extensively studied through various theoretical frameworks that seek to explain the increasing ideological divide within societies. Affective Polarization is one of the most prominent contemporary theories, which emphasizes the growing emotional distance between opposing political groups. According to Iyengar, Sood, and Lelkes (2019), affective polarization is characterized by strong in-group favoritism and out-group hostility, where individuals not only disagree on policy issues but also develop deep-seated animosity towards members of opposing political factions. This theory is supported by empirical studies showing that partisanship has increasingly become a salient aspect of social identity, leading to greater social distance between groups (Mason, 2018).

Another significant model is the Social Identity Theory as applied to political contexts. This theory suggests that as political identities become more entrenched, individuals are more likely to perceive political discourse through the lens of group loyalty, exacerbating polarization (Huddy, Mason, & Aarøe, 2015). The Group Polarization Theory also offers insights, positing that discussions within like-minded groups tend to lead to more extreme positions, a phenomenon that has been magnified by the rise of social media platforms that create echo chambers (Sunstein, 2017).

The Media Effects Theory has been expanded in recent years to account for the impact of social media algorithms on political polarization. Bail et al. (2018) found that exposure to opposing political views on social media can paradoxically increase polarization, as users tend to react negatively to content that challenges their pre-existing beliefs, reinforcing their original viewpoints. Furthermore, the Ideological Sorting model, as discussed by Levendusky (2018), highlights the role of media in not only reinforcing but also creating more homogenous ideological communities, where individuals are sorted into groups that reflect and reinforce their political ideologies.

These recent theoretical advancements underscore the complex interplay between individual psychology, group dynamics, and media influence in driving political polarization. They provide a robust framework for understanding how political identities are shaped, reinforced, and increasingly polarized in the digital age.

#### Social Media's Influence on Public Opinion

Numerous studies have explored the profound impact of social media on public opinion, highlighting its role as both a facilitator and a disruptor of democratic discourse. One of the key findings is that social media platforms have significantly lowered the barriers to entry for public participation in political discussions, allowing individuals to engage in dialogue, share information, and mobilize support for causes on an unprecedented scale (Boulianne, 2019). This democratization of communication has empowered citizens, enabling them to bypass traditional gatekeepers like the mainstream media and directly influence public discourse. However, this shift has also led to the proliferation of misinformation and the creation of echo chambers, where users are exposed primarily to content that reinforces their pre-existing beliefs (Tucker et al., 2018).

Research has shown that social media algorithms, designed to maximize user engagement, often prioritize sensational and emotionally charged content, which can skew public opinion by amplifying extreme viewpoints (Bakshy, Messing, & Adamic, 2015). This phenomenon is particularly evident in the context of political news, where studies have found that users are more likely to

encounter and engage with content that aligns with their ideological preferences, thereby contributing to increased polarization (Allcott & Gentzkow, 2017). Additionally, the real-time nature of social media has been shown to accelerate the spread of information, both accurate and inaccurate, which can rapidly shape public perceptions and influence the political agenda (Vosoughi, Roy, & Aral, 2018).

While social media has the potential to enhance civic engagement and inform public opinion, it also poses significant challenges to the quality of democratic deliberation. The selective exposure to like-minded content, coupled with the echo chamber effect, can lead to a more fragmented public sphere, where common ground becomes increasingly difficult to find (Garrett, 2009). Moreover, the anonymity afforded by social media platforms can embolden users to express more extreme opinions than they might in face-to-face interactions, further exacerbating divisions within society (Gibson & McAllister, 2015). Overall, the influence of social media on public opinion is complex and multifaceted, with both positive and negative implications for democratic processes.

#### The Role of Algorithms in Shaping Public Opinion

Algorithms play a crucial role in shaping public opinion on social media platforms by determining the content that users see in their feeds. These algorithms are designed to maximize user engagement by curating content that is likely to resonate with individual preferences, based on their past behavior, interactions, and network connections (Gillespie, 2018). As a result, users are often exposed to content that aligns with their existing beliefs, which can reinforce their views and contribute to the creation of echo chambers (Pariser, 2011). This selective exposure not only limits the diversity of information that users encounter but also amplifies ideological polarization, as individuals become more entrenched in their viewpoints (Bakshy, Messing, & Adamic, 2015). The influence of algorithms extends beyond content curation; they also play a role in the spread of misinformation. Studies have shown that false news spreads more rapidly than true news on social media, partly due to the way algorithms prioritize sensational and emotionally charged content (Vosoughi, Roy, & Aral, 2018). This can skew public opinion by giving disproportionate visibility to extreme or misleading information, thus distorting perceptions of reality (Pennycook & Rand, 2019). Moreover, algorithms can create a feedback loop where users are continuously fed content that reinforces their biases, leading to a more polarized and fragmented public discourse (Sunstein, 2017).

In addition to influencing individual opinions, algorithms also impact broader societal trends by shaping the political agenda. By amplifying certain topics or perspectives, algorithms can influence what issues are discussed and how they are framed in the public sphere (Tufekci, 2015). This can have significant implications for democratic processes, as the visibility and framing of issues can affect public perceptions and, ultimately, voting behavior (Zhang, Wells, & Wang, 2020). Overall, the role of algorithms in shaping public opinion is complex and far-reaching, with significant implications for both individual users and society as a whole.

#### **Case Studies: Social Media and Political Polarization**

The impact of social media on political polarization has been illustrated through various case studies across different political contexts. One of the most cited examples is the 2016 U.S. Presidential Election, where social media played a pivotal role in shaping public opinion and polarizing the electorate. Research by Allcott and Gentzkow (2017) highlights how the spread of misinformation and "fake news" on platforms like Facebook contributed to deepening political divisions. The study found that false information, often sensational and emotionally charged, spread more widely than factual content, reinforcing existing partisan biases and further polarizing voters.

Another significant case is the Brexit referendum in the United Kingdom, where social media became a battleground for competing narratives. Studies have shown that the Leave campaign effectively used targeted ads on platforms like Facebook to exploit voter fears and uncertainties, contributing to the polarized nature of the debate (Howard & Kollanyi, 2016). The algorithms on these platforms facilitated the creation of echo chambers, where users were predominantly exposed to content that confirmed their pre-existing beliefs, making it difficult for cross-cutting discussions to occur (Jamieson, 2018). In emerging democracies, the role of social media in political polarization has also been profound. For instance, in Brazil, the 2018 presidential election was marked by significant polarization, much of which was driven by social media. Research by Arnaudo (2018) documents how platforms like WhatsApp were used to disseminate politically charged misinformation, exacerbating tensions between supporters of different candidates. The study underscores how the closed nature of messaging apps can create tightly-knit echo chambers, where misinformation can spread unchecked and intensify political divides.

These case studies collectively demonstrate that social media can amplify political polarization by facilitating the spread of misinformation, creating echo chambers, and enabling targeted political messaging that deepens existing divisions. While social media has the potential to democratize information and mobilize civic engagement, these cases highlight the need for greater oversight and the development of strategies to mitigate its polarizing effects.

#### **Counterarguments and Mitigating Factors**

While the prevailing narrative suggests that social media significantly exacerbates political polarization, it is important to consider counterarguments that challenge this perspective. Some researchers argue that the impact of social media on polarization may be overstated and that traditional media, such as cable news, plays a more substantial role in deepening political divides (Prior, 2013). These scholars suggest that the rise in polarization predates the widespread use of social media, indicating that other factors, such as economic inequality, cultural shifts, and partisan media, are more influential in driving polarization (Boxell, Gentzkow, & Shapiro, 2017). Furthermore, studies have shown that not all social media users are equally affected by echo chambers and algorithmic bias; some individuals actively seek out diverse perspectives, which can mitigate the polarizing effects of social media (Dubois & Blank, 2018).

Mitigating factors also play a crucial role in understanding the complex relationship between social media and political polarization. Media literacy programs, for example, can empower users to critically evaluate the information they encounter online, reducing the likelihood of being swayed by misinformation or falling into echo chambers (Guess, Lerner, & Lyons, 2020). Additionally, some social media platforms have begun implementing changes to their algorithms to promote a healthier information ecosystem. For instance, Facebook and Twitter have introduced features to highlight authoritative sources and provide context for trending topics, aiming to reduce the spread of false or misleading information (Pennycook & Rand, 2019).

Moreover, there is evidence to suggest that fostering cross-cutting discussions online can help bridge the ideological divide. Initiatives that encourage dialogue between individuals with differing viewpoints, such as online forums or discussion groups, have the potential to counteract polarization by exposing users to diverse perspectives in a structured and constructive environment (Settle, 2018). These mitigating factors indicate that while social media does have the potential to deepen political polarization, some strategies and interventions can reduce its negative impact, highlighting the importance of a nuanced approach to understanding and addressing this issue.

#### **Regulation and Policy Implications**

Addressing the impact of social media on political polarization requires thoughtful regulation and policy interventions that balance the need for free expression with the responsibility to maintain a healthy public discourse. One of the primary regulatory challenges is ensuring transparency in how social media platforms curate and present content. Policymakers are increasingly advocating for greater algorithmic transparency, requiring platforms to disclose how their algorithms prioritize and amplify certain types of content. This transparency would allow users and regulators to better understand the potential biases inherent in these systems and hold platforms accountable for their role in shaping public opinion.

Additionally, there is growing support for the implementation of measures that promote content diversity on social media. For example, regulations could mandate that platforms provide users with exposure to a wider range of viewpoints, thereby reducing the echo chamber effect that exacerbates polarization. This could be achieved through algorithmic adjustments that prioritize content from credible sources or through features that encourage users to engage with content outside their usual information bubbles.

Fact-checking initiatives and the labeling of misinformation are other critical areas where policy interventions could make a significant impact. Governments and regulatory bodies are exploring ways to collaborate with social media companies to develop more robust systems for identifying and countering misinformation. This might include the development of standardized guidelines for labeling false or misleading content and the creation of independent oversight bodies to monitor and enforce these standards.

However, implementing such regulations poses significant challenges. Social media companies often resist regulatory efforts, citing concerns about stifling innovation and infringing on free speech rights. Additionally, the global nature of these platforms complicates the enforcement of regulations, as different countries have varying legal frameworks and standards for online content. Despite these challenges, the growing recognition of social media's influence on political polarization underscores the need for comprehensive and coordinated policy responses that can effectively mitigate the negative impacts while preserving the benefits of digital communication.

#### Conclusion

In conclusion, the influence of social media on political polarization is both profound and multifaceted, shaping public opinion in ways that were previously unimaginable. The rise of social media platforms has democratized information dissemination, empowering individuals to engage in political discourse on a global scale. However, this democratization has also introduced new challenges, including the amplification of extreme viewpoints, the creation of echo chambers, and the rapid spread of misinformation. These dynamics have contributed to deepening ideological divides, with significant implications for democratic processes and social cohesion. While algorithms play a central role in curating the content that users see, they also reinforce biases and limit exposure to diverse perspectives, further entrenching polarization.

Nevertheless, the relationship between social media and political polarization is complex, with some scholars arguing that the impact of social media may be overstated and that other factors, such as traditional media and broader socio-political trends, also play critical roles. Mitigating the polarizing effects of social media will require a multifaceted approach, including regulatory measures that promote transparency and content diversity, as well as initiatives that enhance media literacy and encourage cross-cutting dialogue. As social media continues to evolve, both policymakers and platform developers must work together to create an online environment that fosters informed and constructive public discourse, rather than division. Addressing the challenges posed by social media is not only essential for reducing polarization but also for ensuring the health and vitality of democratic societies in the digital age.

#### References

- Germani F, Pattison AB, Reinfelde M. WHO and digital agencies: how to effectively tackle COVID-19 misinformation online.
  BMJ Global Health. 2022 Aug 1;7(8):e009483.
- 2. Boylston A. The origins of inoculation. Journal of the Royal Society of Medicine. 2012 Jul;105(7):309-13.
- 3. Fitzpatrick M. The Anti-Vaccination Movement in England, 1853–1907.
- Carapetis JR. The Cutter Incident: How America's First Polio Vaccine Led to the Growing Vaccine Crisis. BMJ. 2006 Mar 23;332(7543):733.
- 5. Smith MJ, Ellenberg SS, Bell LM, Rubin DM. Media coverage of the measles-mumps-rubella vaccine and autism controversy and its relationship to MMR immunization rates in the United States. Pediatrics. 2008 Apr 1;121(4):e836-43.

- Pennycook G, Epstein Z, Mosleh M, Arechar AA, Eckles D, Rand DG. Shifting attention to accuracy can reduce misinformation online. Nature. 2021 Apr 22;592(7855):590-5.
- Bridgman A, Merkley E, Loewen PJ, Owen T, Ruths D, Teichmann L, Zhilin O. The causes and consequences of COVID-19 misperceptions: Understanding the role of news and social media. Harvard Kennedy School Misinformation Review. 2020 Jun 18;1(3).
- 8. PEARSON A. Math Matters. ASHRAE Journal. 2022 Dec 1;64(12).
- Gallotti R, Valle F, Castaldo N, Sacco P, De Domenico M. Assessing the risks of 'infodemics' in response to COVID-19 epidemics. Nature human behaviour. 2020 Dec;4(12):1285-93.
- Cinelli M, Quattrociocchi W, Galeazzi A, Valensise CM, Brugnoli E, Schmidt AL, Zola P, Zollo F, Scala A. The COVID-19 social media infodemic. Scientific reports. 2020 Oct 6;10(1):1-0.
- Swire-Thompson B, Lazer D. Public health and online misinformation: challenges and recommendations. Annu Rev Public Health. 2020 Apr 2;41(1):433-51.
- Van der Linden S, Dixon G, Clarke C, Cook J. Inoculating against COVID-19 vaccine misinformation. EClinicalMedicine.
  2021 Mar 1;33.
- Enders AM, Uscinski JE, Seelig MI, Klofstad CA, Wuchty S, Funchion JR, Murthi MN, Premaratne K, Stoler J. The relationship between social media use and beliefs in conspiracy theories and misinformation. Political behavior. 2021 Jul 7:1-24.
- Zaman K, Mishra SK, Mohanty A, Padhi BK, Sah R. Measles outbreak in American Samoa: Alarm to strengthen vaccination post COVID-19 pandemic. International Journal of Surgery Open. 2023 Jun 1;55:100624.
- 15. Loomba S, De Figueiredo A, Piatek SJ, De Graaf K, Larson HJ. Measuring the impact of COVID-19 vaccine misinformation on vaccination intent in the UK and USA. Nature human behaviour. 2021 Mar;5(3):337-48.
- 16. Okita T, Enzo A, Kadooka Y, Tanaka M, Asai A. The controversy on HPV vaccination in Japan: Criticism of the ethical validity of the arguments for the suspension of the proactive recommendation. Health Policy. 2020 Feb 1;124(2):199-204.
- Unicef. COVAX: ensuring global equitable access to COVID-19 vaccines. UNICEF, available at< https://www. unicef. org/supply/covax-ensuring-global-equitable-accesscovid-19-vaccines>(last visited Sept. 15, 2022). 2021.
- Polack FP, Thomas SJ, Kitchin N, Absalon J, Gurtman A, Lockhart S, Perez JL, Pérez Marc G, Moreira ED, Zerbini C, Bailey R. Safety and efficacy of the BNT162b2 mRNA Covid-19 vaccine. New England journal of medicine. 2020 Dec 31;383(27):2603-15.

- Islam MS, Sarkar T, Khan SH, Kamal AH, Hasan SM, Kabir A, Yeasmin D, Islam MA, Chowdhury KI, Anwar KS, Chughtai AA. COVID-19–related infodemic and its impact on public health: A global social media analysis. The American journal of tropical medicine and hygiene. 2020 Oct;103(4):1621.
- 20. Caceres MM, Sosa JP, Lawrence JA, Sestacovschi C, Tidd-Johnson A, Rasool MH, Gadamidi VK, Ozair S, Pandav K, Cuevas-Lou C, Parrish M. The impact of misinformation on the COVID-19 pandemic. AIMS Public Health. 2022;9(2):262.
- 21. Allington D, Duffy B, Wessely S, Dhavan N, Rubin J. Health-protective behaviour, social media usage and conspiracy belief during the COVID-19 public health emergency. Psychological medicine. 2021 Jul;51(10):1763-9.
- Freeman D, Waite F, Rosebrock L, Petit A, Causier C, East A, Jenner L, Teale AL, Carr L, Mulhall S, Bold E. Coronavirus conspiracy beliefs, mistrust, and compliance with government guidelines in England. Psychological medicine. 2022 Jan;52(2):251-63.
- Liu J, Regulagedda RM. Social Network Analysis of Misinformation Spreading and Science Communication during COVID-19. Proceedings of the Association for Information Science and Technology. 2023 Oct;60(1):1059-61.
- 24. Cleve M. What the lightning-fast quest for Covid vaccines means for other diseases. Nature. 2021 Jan 7;589:16-8.
- 25. Cinelli M, Quattrociocchi W, Galeazzi A, Valensise CM, Brugnoli E, Schmidt AL, Zola P, Zollo F, Scala A. The COVID-19 social media infodemic. Scientific reports. 2020 Oct 6;10(1):1-0.
- Ahmed S, Rasul ME. Social media news use and COVID-19 misinformation engagement: survey study. Journal of Medical Internet Research. 2022 Sep 20;24(9):e38944.

### ABOUT EMBAR PUBLISHERS

Embar Publishers is an open-access, international research based publishing house committed to providing a 'peer reviewed' platform to outstanding researchers and scientists to exhibit their findings for the furtherance of society to provoke debate and provide an educational forum. We are committed about working with the global researcher community to promote open scholarly research to the world. With the help of our academic Editors, based in institutions around the globe, we are able to focus on serving our authors while preserving robust publishing standards and editorial integrity. We are committed to continual innovation to better support the needs of our communities, ensuring the integrity of the research we publish, and championing the benefits of open research.

## <mark>Our Journals</mark>

- 1. <u>Research Journal of Education , linguistic and Islamic Culture 2945-4174</u>
- 2. <u>Research Journal of Education and Advanced Literature 2945-395X</u>
- 3. <u>Research Journal of Humanities and Cultural Studies 2945-4077</u>
- 4. Research Journal of Arts and Sports Education 2945-4042
- 5. <u>Research Journal of Multidisciplinary Engineering Technologies 2945-4158</u>
- 6. Research Journal of Economics and Business Management 2945-3941
- 7. <u>Research Journal of Multidisciplinary Engineering Technologies 2945-4166</u>
- 8. Research Journal of Health, Food and Life Sciences 2945-414X
- 9. Research Journal of Agriculture and Veterinary Sciences 2945-4336
- 10. Research Journal of Applied Medical Sciences 2945-4131
- 11. Research Journal of Surgery 2945-4328
- 12. Research Journal of Medicine and Pharmacy 2945-431X
- 13. Research Journal of Physics, Mathematics and Statistics 2945-4360

## Contact info:

editor.rjhss@embarpublishers.com contact@embarpublishers.com director@embarpublishers.com ceo@embarpublishers.com