The study on role of media diversity and political interest on echo chamber effect
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Abstract
Purpose – Social media has made people better informed but also easier to manipulate. By using literature review and observing social media, the authors found a problem about echo chamber effect. The purpose of this paper is to know how the echo chamber affects the people who consume political news and the role of media diversity in it.

Design/methodology/approach – To conduct this study, the authors used a structured questionnaire on the Qualtrics platform to collect data from 183 participants. The authors collected data using a simple random technique. This study is based on the cross-sectional survey; the data collection period is from October to November 2023. The authors used the SPSS software to analyze the relationships between the variables and test the hypothesis.

Findings – This study found that, echo chamber is not affected by media diversity. Because of increased political interest, people will be less influenced by echo chambers. In addition, demographic factors affect political interest. People use search engines and social media sites instead of political websites when it comes to the consumption of political news online. People like to communicate with individuals who hold conflicting political views.

Originality/value – Researchers have not yet been able to gain a clear understanding of whether users are in an echo chamber or not and how they are interacting in that environment. Research on this topic is still going on from different perspectives. This study helped to clarify whether or not more media consumption will affect echo chambers. The possibility of being trapped in an echo chamber exists whether we use a single medium or a variety of media. The novelty of this study lies in the use of the echo chamber scale to investigate a thorough understanding of this word through the use of many factors.

Keywords Echo chamber, Political news, Media diversity, Political interest, Social networks

Paper type Research paper

Introduction
In the early days of the internet, it was assumed that it would connect people all over the globe and exchange cultural, social and economic development (Setkute and Dibb, 2022). The internet provides the various platform to share, explore and discuss our views and ideas. However, in the past few years, it supports to violation of human rights, cyberattacks,
fake news, misinformation, the illegal spread of content, digital protests and trolling that leads to internet shutdown, online bubbles and polarization of society. In 2022, the USA and other 60 nations signed a political declaration called the “Declaration for the Future of the Internet” aiming to protect human rights and promote a single global internet.

If two people at the exact time start checking out the same topic, then both the individual will see diverse results at the same time. It is not solely Google that is doing personalization but numerous browsers, websites and applications provide personalization to offer results to users as per interests and likes. It is indeed true that technology understands us better than ourselves, but it forms a few crucial issues for users like, directly or indirectly collecting their data to make users narcissists, who pride self-centered personalities created by algorithms. Author Winner says in his book The Whale and the Reactor, “Our narcissistic tendencies are getting stronger as a result of the selection of web-based news stuff.” Another matter is, different people take the exact information and create different viewpoints, forming their own communities and continuing to follow each other. This community member does not have basic intellectual foundations (Nguyen, 2020). As told by Halberstam and Knight (2014), “People may be losing the skills to differentiate information from opinion.”

It is possible for people to select their own news on the internet, but that kind of environment is more dangerous for echo chambers. A variety of news sources are available to people, including newspapers, radios, magazines, search engines and so on. There are two possibilities here. People in a diverse media environment either provide different opinions or provide the same idea repeatedly, creating an echo chamber. In the era of social media and the internet, there are more chances of being trapped in echo chambers if individuals depend entirely on social media and the internet. What we are and what we really do on a digital platform that is filtered out with the aid of algorithms and that develops a filter bubble (Steiner et al., 2022). In a bubble that comprises all the information that we like more, we interact more, so in that bubble, we find only our perspective instead a balanced approach.

This study differs from others, it concentrates on how people consume political news and the media they choose, as compared with the influence of algorithms and other factors. In a democracy, it is essential for people to communicate with one another and to have access and use all relevant information; as such, the existence of an echo chamber will have a damaging effect on the nation. This study focuses on consumers’ news consumption practices and the effects of their consumption across multiple media.

The novelty of this study lies in the use of the echo chamber scale to investigate a thorough understanding of this word through the use of many factors. This in-depth perspective gives the connection between user’s media diversity and news media consumption habits.

**Literature review**

We are living in a society; we have to trust each other. In every area of our lives, we are intensely dependent on one another. It is impossible for us to survive without each other. People need to trust each other, but too much trust makes them vulnerable (Baier, 1986) and can create an echo chamber (Nguyen, 2020). When people join social media platforms, they are easily drawn into the echo chamber. (Bachmann et al., 2022) In an offline world, echo chambers can be created by watching favorite TV channels or reading the news, whereas in an online world, echo chambers can easily be created through the internet. The internet provides a high-quality media environment that allows people around the world to connect and meet like-minded individuals without any restrictions. Global audiences are affected greatly by online content (Abisheva et al., 2016). Echo chambers harm cognitive abilities, as
one hears a story and then hears it again, and there will be more repetitions of that story, even if it is totally false (Pennycook et al., 2018).

Essentially, it is an environment where one's attitude is reinforced by the same information, opinions and beliefs and where one tries to avoid opposing views and attitudes as much as possible (Jamieson and Cappella, 2008). Echo chambers are like cults. A cult that vigorously separates its members from external sources, which is pointed out as malevolent and untrustworthy. A cult member only trusts their inside voice (Jamieson and Cappella, 2008). As a result of echo chambers, people tend to believe in their views and strongly avoid probing or finding evidence that supports or contradicts their opinions. As a result, they merely trust emotions and opinions, which is evidence of posttruth (Nguyen, 2020; Jamieson and Cappella, 2008). It is often claimed that echo chambers serve as addictions, forming false propaganda or theories that are labeled as corrupt or untrustworthy (Ross Arguedas et al., 2022). On the contrary, echo chambers are much less widespread than is commonly assumed.

As a result of the wide availability of media, people are more likely to choose media content that supports their beliefs, and people with different beliefs will select media according to their own preferences. That leads to polarization (Sunstein, 2002). According to research, people in the media choose information that supports their own views repeatedly (Iyengar and Hahn, 2009). Therefore, news media sources will be reduced automatically, and only sources that support one's own attitude will be used (Sinderman et al., 2020). In a world, where many people have preexisting views, they tend to consume news exclusively from certain limited media sources (Sinderman et al., 2020). The echo chamber effect is less likely to occur if users consume information from multiple media sources. There was a negative association between media diversity and being trapped in an echo chamber (Dubois and Blank, 2018).

It has been found that echo chamber research is problematic in spite of the fact that there are many studies that deal with it. Although Twitter appears to create an echo chamber (Conover et al., 2011), we cannot generalize the entire concept based on one medium despite the availability of many others. Good information and bad information are equally accessible to users on Twitter and Facebook (Qiu et al., 2017). In their study, Facebook and Twitter were defined as “social awareness streams” in which people shared their emotions (Abisheva et al., 2016). Among Facebook users, only 10%–28% live in a filter bubble (Bechmann and Nielbo, 2018).

In general, people prefer to read news stories from news websites or online content that matches their own political beliefs (Iyengar and Hahn, 2009). As a result, most people read news that is aligned with their own views and opinions (Garrett, 2009). It is important to keep in mind that online content can have a significant impact on the polarization and diversification of communities because of its emotional appeal (Abisheva et al., 2016). There is a claim that social media is responsible for spreading fake news and creating echo chambers (DiFranzo and Gloria-Garcia, 2017). Political classification in digital media polarizes society, generating a storm wherein an increasing number of identities, beliefs and cultural preferences are entangled in a societal divide that permeates every aspect of life (Tornberg, 2022). It has been discovered that people do not ignore opposing viewpoints (Garrett, 2009). There is a 4.34% risk of being caught in an echo chamber or filter bubble if consumers consume personalized news solely through digital platforms (Sinderman et al., 2020).

There are people who either believe in politics or dislike it, then there are those who consume news as an informative citizen and, finally, there are those who are highly connected with political parties or news (Chan et al., 2023). Individuals use different mediums to consume and react to information. With the help of the internet, people are able
to get a wide variety of media and news and get access to a lot of political and news information (Sindermann et al., 2020; Van Aelst et al., 2017). Biased results from internet searches have the potential to influence the voting preferences of those who have little or no interest in politics (Epstein and Robertson, 2015). A person with a higher level of political interest will be more likely to consume political information than the general public (Guess et al., 2018). There is a possibility that social networks can serve as polarization machines (Sunstein and Vermeule, 2009). During polarization, people develop divergent views and segment themselves according to their preferences (Sunstein, 2002). Social media is a system where highly credible and quality information can be found, but it is also where fake news and polarized opinions can be found (Rappa and ACM Digital Library, 2010). Filter bubbles and echo chambers have a horrifying effect when national news events or political camps occur that can damage democracy (Bozdag and van den Hoven, 2015). There is also a high explosion of fake news among users that is caused by echo chambers and filter bubbles. Political parties spread fake content and hate speech in the local language via social media without much accountability. Google Transparency Report states that over the past two years, political parties have primarily spent about $800m (roughly Rs. 5,900 crores) on election advertisements.

Various studies focus on single media platforms like Facebook, Twitter and the like, yet people use all accessible media to consume news, thus conclusions cannot be drawn from just one platform. People do not rely on a single source to get their news. Furthermore, the term “echo chamber” lacks a precise meaning. A person’s interactions with the media environment as a whole result in the creation of an echo chamber where they are exposed to both contradicting and interesting information (Prior, 2009).

The research question here is “Does the echo chamber impact the political news consumers and what role media diversity plays in it?”

Research objectives
As each medium has its own characteristics, such as Twitter and Facebook, there is no one size fits all. As a result, it is imperative that we understand all the available media, regardless of whether they are online or offline. Every medium has a different flow of political information, and how people reach, consume and react to it is different in each. The second problem is that there is not sufficient data and scale for a single platform to measure echo chambers. Researchers have not yet been able to gain a clear understanding of whether users are in an echo chamber or not and how they are interacting in that environment. Research on this topic is still going on from different perspectives. This study has been done in one state of India, which will be the first research on this topic in this geographical area. The objective of this research is to know how the echo chamber affects the people who consume political news and the role of media diversity in it.

Research methodology
The majority of people use various types of media to find political news, so studies that focus on only one platform are not sufficient to assess the echo chamber effect. Internet and social media are only part of the news consumption mode and also a less trusted one. Political news can be consumed through many methods like newspapers, TV, radio, word of mouth and the internet. All media are not used as same, each has its own purposes and features. So, it is important to consider all available media and their role among users. The more individuals consume diverse content through multiple media, the more they encounter and read opposing viewpoints and facts, and the greater the likelihood that they will avoid echo chambers. Our first hypothesis is:
H1. People will be less influenced by echo chambers as a result of more media diversity. (Eveland and Scheufele, 2000). Politics is more familiar to those who consume news media more frequently. People who are engaged in politics tend to be more information-hungry, which allows them to see a variety of viewpoints and arguments. (V. H. Nguyen and Claus, 2013). They also frequently seek to comprehend situations in depth and stay out of echo chambers. This led to our second hypothesis:

H2. People will be less influenced by echo chambers as a result of more political interest

One medium is insufficient to provide the whole picture. We are asking questions concerning all forms of media consumption in this study. Demographic variables also specify who uses what kinds of information and asked detailed questions about whether or not they are attempting to avoid echo chambers.

Data
We collected data using a simple random technique. In total, 138 samples are drawn from Rajkot, city in Gujarat, India. To collect the data, we have used a structured questionnaire, prepared in the Qualtrics platform. The study is based on the cross-sectional survey, the data collection period is from October to November 2023.

Measure and scales
We include five demographic variables: age, gender, marital status, occupation and education, as control variables. For political interest, asked “How interested are you in politics?” (Dubois and Blank, 2018) using the five-category Likert scale from “No interest” to “Very interested.” For Media diversity, we used a Likert scale (Dubois and Blank, 2018). We asked “How often do you go to [. . .] looking for information about political news or issues?” using five-category Likert scale from “Very often” to “Never.” Also asked “How often do you go to [. . .] online for political news?” (Dubois and Blank, 2018). To know the echo chamber effect, there are six constructs: a disagreement with other content, finding different sources to read, finding online people whom we can trust, confirming online information with other sources, confirming the word-of-mouth information with other sources and confirming major news source’s information with other sources.

Results
According to the data (see Table 1), most respondents were women. Nearly 50% of respondents are salaried people. Young postgraduate students responded to this survey more commonly. The majority of our respondents are between the ages of 21 and 30. When we asked, “Have you ever changed your mind about a political or social issue after knowing something through online searching?”, 54.35% of people said Maybe, 26.09% said strict No and 19.57% Yes. We can infer from this that people do not regard online research as a reliable source, and even after doing so, they continue to hold on to their own beliefs. Each news website, mobile application and social media platform decides what political content to display to people. “A nice way to get political news is to read articles chosen by editors and journalists,” on this statement, 54.35% of respondents agree, where “A good way to get political news is to have stories automatically chosen based on what I have previously looked at,” 39.13% of respondents agree with this statement. And last, 30.43% of people disagree with “A good way to get political news is to have stories automatically chosen
based on what my friends have looked at” (Goldberg, 2010). It is coverage reliability, which means information related to the relative situation does not seem to be sufficiently and authentically delivered. That means people still believe in journalists and customized news as a better source. We also questioned, “Which political party do you believe should handle delicate subjects like national security?” Bharatiya Janata Party is supported by the public with 78.79%, followed by the Indian National Congress and Other Party with 9.09% and 12.12%, respectively.

When asking to them about whether they are aware of the opinions of others regarding political candidates and issues, almost half of the people are confused. 54.35% of people communicate online with those who have mixed types of political beliefs. Here, we can assume that people will use all available knowledge and listen to it. Measurements of the echo chamber effect are shown in Figure 1 using six constructs.

We examined the relationship between the echo chamber effect and media diversity using Pearson correlation in the SPSS software. We reject our first hypothesis because the data show there is no correlation between the two. The Media Diversity variable includes all media forms, not just new media, like family and friends, politicians, candidates and political parties, as well as their platforms on radio and television, periodicals, newspapers, religious institutions or charitable organizations, as well as online news sources and search engines. It is not because of more or less media exposure, according to respondents, that the echo chamber effect exists. We discovered a correlation between political interest and echo chambers using Pearson’s test. That confirms our second hypothesis. People will be less influenced by echo chambers as a result of increased political interest. We can conclude from this that those who are more interested in politics will conduct thorough research, confirm their findings and read widely while avoiding echo chambers.

<table>
<thead>
<tr>
<th>Demographic variables</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
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<tr>
<td>Less than 20 years</td>
<td>03</td>
<td>02.17</td>
</tr>
<tr>
<td>21–25 years</td>
<td>84</td>
<td>60.87</td>
</tr>
<tr>
<td>26–30 years</td>
<td>42</td>
<td>30.44</td>
</tr>
<tr>
<td>More than 31 years</td>
<td>09</td>
<td>06.52</td>
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<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>75</td>
<td>54.35</td>
</tr>
<tr>
<td>Male</td>
<td>63</td>
<td>45.65</td>
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<td><strong>Education</strong></td>
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<td>Diploma/Higher secondary</td>
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<td>02.17</td>
</tr>
<tr>
<td>Graduate</td>
<td>33</td>
<td>23.92</td>
</tr>
<tr>
<td>Postgraduate</td>
<td>102</td>
<td>73.91</td>
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<tr>
<td><strong>Occupation</strong></td>
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<td></td>
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<tr>
<td>Business</td>
<td>15</td>
<td>10.87</td>
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<tr>
<td>Salaried person</td>
<td>66</td>
<td>47.83</td>
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<tr>
<td>Unemployed</td>
<td>09</td>
<td>06.52</td>
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<tr>
<td>Student</td>
<td>48</td>
<td>34.78</td>
</tr>
<tr>
<td><strong>Marital status</strong></td>
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<td></td>
</tr>
<tr>
<td>Married</td>
<td>21</td>
<td>15.22</td>
</tr>
<tr>
<td>Single</td>
<td>117</td>
<td>84.78</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>138</td>
<td></td>
</tr>
</tbody>
</table>

Table 1. General background of users

Source: Authors’ own work
We have tested hierarchical regression between dependent and independent variables while controlling five demographic variables: age, gender, marital status, occupation and education. In Table 2, we can see that there is no relation between media diversity and the independent variable or any of the other control variables. Where political interest is correlated with age, education, occupation and marital status. That implies that demographic factors also have an impact on political interest and knowledge.

**Discussion**

The internet provides us with what it believes we should see, but not what is truly necessary. It is not known to people what kind of information is being consumed and how it is being analyzed, so they believe everything is just a balance view among bubbles (Pariser, 2011). Algorithms in our devices are personalized to such an extent that they make our views and beliefs very strong. So even though we use different media, we do not accept the opposite views and prefer to stay in the echo chamber. The study says that people who are interested in politics stay away from the echo chamber. Radio is the least favored channel for the consumption of political news, with consumers favoring online search and social media more frequently than other forms of media. People use search engines and social media sites instead of political websites when it comes to the consumption of political news online. People like to communicate with individuals who hold conflicting political views. Respondents believe that talking to family and friends and watching television will help them understand more about politics. According to a survey, respondents feel helpless when trying to discover accurate political information because they think there is a huge amount of political information available in every medium, making it impossible for them to go for reliable sources. People still trust editors and their stories in the modern era. We may anticipate that people who consume a lot of high-quality media will change their opinions.
Table 2. Hierarchical regression

<table>
<thead>
<tr>
<th>Variables</th>
<th>Age</th>
<th>Gender</th>
<th>Education</th>
<th>Occupation</th>
<th>Marital status</th>
<th>Echo chamber</th>
<th>Media diversity</th>
<th>Political interest</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Echo chamber</strong></td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Pearson correlation</td>
<td>0.100</td>
<td>-0.072</td>
<td>-0.043</td>
<td>-0.111</td>
<td>-0.319**</td>
<td>1</td>
<td>-0.001</td>
<td>0.200*</td>
</tr>
<tr>
<td>Sig. (two-tailed)</td>
<td>0.243</td>
<td>0.404</td>
<td>0.620</td>
<td>0.197</td>
<td>0.000</td>
<td>-</td>
<td>0.992</td>
<td>0.018</td>
</tr>
<tr>
<td>N</td>
<td>138</td>
<td>138</td>
<td>138</td>
<td>138</td>
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<tr>
<td><strong>Media diversity</strong></td>
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<tr>
<td>Pearson correlation</td>
<td>0.104</td>
<td>0.108</td>
<td>-0.004</td>
<td>0.011</td>
<td>-0.003</td>
<td>-0.001</td>
<td>1</td>
<td>-0.020</td>
</tr>
<tr>
<td>Sig. (two-tailed)</td>
<td>0.223</td>
<td>0.206</td>
<td>0.962</td>
<td>0.897</td>
<td>0.972</td>
<td>0.992</td>
<td>1</td>
<td>0.820</td>
</tr>
<tr>
<td>N</td>
<td>138</td>
<td>138</td>
<td>138</td>
<td>138</td>
<td>138</td>
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<td>138</td>
<td>138</td>
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<tr>
<td><strong>Political interest</strong></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pearson correlation</td>
<td>0.259**</td>
<td>-0.047</td>
<td>-0.279**</td>
<td>-0.194**</td>
<td>-0.428**</td>
<td>0.200*</td>
<td>-0.020</td>
<td>1</td>
</tr>
<tr>
<td>Sig. (two-tailed)</td>
<td>0.002</td>
<td>0.585</td>
<td>0.001</td>
<td>0.022</td>
<td>0.000</td>
<td>0.018</td>
<td>0.820</td>
<td>-</td>
</tr>
<tr>
<td>N</td>
<td>138</td>
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<td>138</td>
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**Notes:** **Correlation is significant at the 0.01 level (two-tailed); *correlation is significant at the 0.05 level (two-tailed)**

**Source:** Authors' own work
Conclusion and future research
The limitation of the study is that, although the conclusion is based only on this small sample of data, there is a chance that it contains an ecological fallacy. Another limitation is that sometimes respondents do not express how intense their perspective or attitude is.

There are two more general implications for this study. First, we have included different scales to define the terms that can stretch and conceptualize even broader, like the echo chamber scale. Another implication is that, rather than using a single medium analysis that ignores other media while studying, we used a multiperspective method to question through single research the media choices people make, why they choose them, when and why they are in echo chambers and how they escape them. People can understand an echo chamber scenario if it arises, if they are more conscious of the decisions they make.

Social media is the most promising tool for documenting human history from the Stone Age to the Digital Age. Nowadays, social media is more than just a safe place to interact with loved ones. Rather, it has evolved into a significant arena for political activity and the development of fresh political discourse. Government policies have never before been as well known to the populace as they are today. During the COVID pandemic, for instance, social media was very successful in raising awareness of the need for precaution and in mobilizing leads for medications. The use of the internet by politicians to communicate with their supporters. Each election campaign now relies on data analytics. The election campaign committee can achieve a better understanding of the electorate and tailor their policies accordingly; however, that also leads to periodic religious tensions. Social media gives political parties access to data on voter preferences, which they can use to further influence voters, particularly swing voters, whose opinions can be enticed by disseminating incorrect information.

This study has discovered how the echo chamber effect is influenced by political interest and media diversity. While there is no correlation between media diversity and echo chambers, we did find one between political interest and echo chamber. To understand the true impact of echo chambers, future research can be done on analyzing each medium in a longitudinal manner. Researchers can also develop various scales to determine the factors that contribute to echo chamber impact. What are the various media in which echo chambers occur, and how? There are many questions that are not yet solved, which can be solved through research, and solutions can be given to the users via their research.

References


Further reading

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