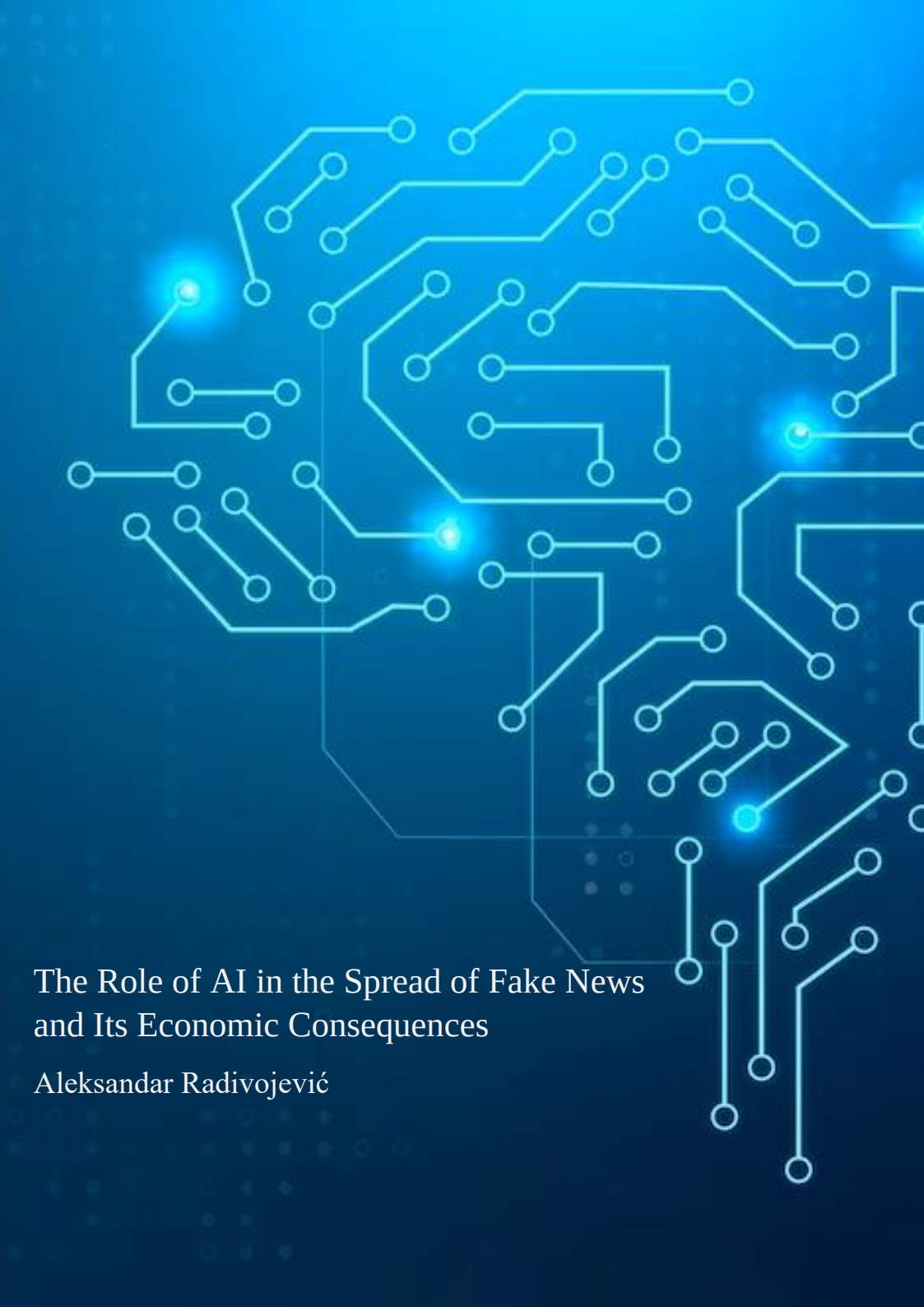

The Role of AI in the Spread of Fake News and Its Economic Consequences

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Introduction

Fake news gained importance in the recent years, and as concrete the phrase seams, it refers to much more than just false news and includes, intentionally misleading conclusions on actual news, misrepresentation of conclusion with sensationalistic headlines, and other.

Term yellow news represents misinterpretation of information in form of news and is present since late 1800s[1]. Influence of such news gained on importance with the development of mass production of news. The most important influence gave digital transformation of communication and rapid development of dissemination methods which revolutionized how we consume news while ease of access and speed has also led to the proliferation of false or misleading information presented as true news.

At the outset, fake news were primarily used as a means of gaining political power. However, the implications of fake news in today's interconnected world are far more reaching and have extended beyond the political sphere into the economic realm. Fake news can influence public perception of economic conditions, market trends, and the financial health of companies, leading to irrational financial behavior, market volatility, and even economic crises.

For example, a false report about a company can lead to significant fluctuations in its stock price, affecting investors and

[1] https://www.britannica.com/topic/yellow-journalism

the market at large. The effects, however, are much broader and can impact entire industries and even countries.

The importance of studying the impact of fake news on economic development cannot be overstated. The development of Artificial Intelligence further emphasizes the importance of understanding the relationship between fake news and economic events, which is crucial for formulating policies and strategies to mitigate the negative effects of fake news on the economy.

This report aims to provide insight into the impact of fake news on economic development, exploring its effects on various economic sectors, and suggesting potential measures to counteract its negative implications. Specifically, the study opens the topic of AI's impact on fake news and economic development as a transformative technology that will have a significant impact on the dissemination of information. The modalities and the level of impact of AI are yet unknown, given the stage of development of the technology, but potential channels of influence must be investigated as the time for reaction to AI development is very short and much needed.

Fake News Impact on Economic Developments

On a macroeconomic level, fake news can influence public opinion and, consequently, policy-making. Although policy-making is seldomly based on unconfirmed and unchecked information, public sentiment can influence policy makers, especially in less developed countries, to act based on

popularity rather than facts. Public opinion on the importance of a foreign country for their own country's interests can affect policy makers' decisions, forcing them to balance between the right economic choices regarding that foreign country and public sentiment.

Numerous examples exist of fake news influencing the economy on a microeconomic level. News have a significant impact on stock and commodity prices, as information about the real performance of companies and markets is not always available to non-professional traders. Fake news can manipulate financial markets, influencing not only investment choices but also stock prices. False rumours about a company's performance and financial health can cause its stock price to plummet, affecting investors and the overall market. The rise of cryptocurrencies is the most recent significant market event that was based mainly on rumours and non-data-based predictions, leading to a highly volatile and risky market.

Fake news can also influence consumer behavior, in the same way that non-fake news can. Consumer awareness about different aspects of products has gained importance over the last few decades, regarding product quality, eco-labels, the producer's engagement in socially acceptable activities, care for nature and people, etc. Fake news about such aspects of a product or producer can lead to irrational purchasing decisions.

Investors also rely on accurate information to make investment decisions. Although big investors rarely rely on unchecked information, financial market development has introduced investment options for ordinary people who do rely on news for investment choices. Fake news can mislead investors, causing them to make poor investment choices that can lead to financial losses and affect economic growth. The most famous example

of such an event happened in 2013, resulting in a 143-point fall in the Dow Jones industrial average after hackers sent a message from the Twitter feed of the Associated Press in the United States, saying the White House had been hit by two explosions and that Barack Obama was injured. Although the market quickly recovered, the event showed the possible scale of fake news' influence on investors' decisions.

Fake news can erode public trust in economic institutions. The main problem is that once lost, public trust is hard to recover, even if the fake news was a consequence of non-intentional statements or mistakes.

Relevant Actors in Combating Fake News

Governments and Policy Makers

The role of governments and policy makers is essential in mitigating the impact of fake news on economic development. They have the responsibility and the means to create an environment that discourages and punishes the spread of fake news, while at the same time preserving freedom of speech and the free flow of information. Balancing these two aspects is a significant challenge that regulators face today, especially as freedom of speech has become a widely accepted norm in many countries around the world.

Forms in which policy makers and institutions implementing them can mitigate negative effects of fake news are:

1. Regulations on the dissemination of information, particularly on digital platforms where fake news are most commonly present.

Policies which oblige digital platforms providers to remove fake news when observed.

Penalties for those who knowingly spread false information that can harm the economy.

Creating a list of individuals and organizations penalised for fake news dissemination.

Germany's Network Enforcement Act (NetzDG), introduced in 2018, oblige social media platforms with more than two million registered users in Germany (Facebook, YouTube, Twitter, etc.) to remove or block access to illegal content, including fake news, within 24 hours of receiving a complaint for clearly fake news and 7 days for those which are reported and prove to be fake. Failure to comply can result in fines of up to 50 million euros.

The Protection from Online Falsehoods and Manipulation Act 2019, known colloquially as Fake News Law, is a statute of the Parliament of Singapore that enables authorities to tackle the spread of fake news or false information. It also allows for criminal charges against individuals who knowingly spread false information that harm public interest.

2. Work with technology companies to develop more effective algorithms and artificial intelligence systems to detect and filter out fake news. This collaboration could also extend to sharing information and best practices to combat the spread of false information.

Developing programs for fake news recognition.

Creating office for fake news information source assessment.

Banning access to digital platforms for persons or institutions spreading fake news.

Canadian government partnered with Facebook ahead of its 2019 elections to remove fake accounts and disrupt the spread of deceptive content. In response to Singapore's Protection from Online Falsehoods and Manipulation Act (POFMA)[2], tech companies like Facebook, Twitter, and Google have been working closely with the government to comply with the law and develop measures to combat fake news.

3. Invest in education and public awareness campaigns to help citizens better identify fake news.

Developing critical thinking skills.

Promoting media literacy.

Finland's government has integrated media literacy into the core curriculum for all students. The Finnish approach focuses on critical thinking and fact-checking to help students identify misinformation.

Funded by Google and the Google News Initiative, the Poynter Institute's MediaWise project aims to teach American teenagers how to sort fact from fiction online. The project includes a curriculum for educators, a website with resources, and a strong social media presence.

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[2] https://sso.agc.gov.sg/Acts-Supp/18 2019#:~:text=An%20Act%20to%20prevent%20the,to%20be%20taken%20to%20enhance

4. Create multinational operations regarding this problem as fake news can easily cross borders.

Creating global initiatives.

European Union's Action Plan Against Disinformation[3] sets out key actions to tackle disinformation as part of a coordinated approach by the European Union and the Member States. The EU has implemented a comprehensive approach to tackle disinformation, including the establishment of a Rapid Alert System to facilitate the sharing of data and assessments of disinformation campaigns among EU member states. EU is constantly increasing funding for research into the impact of fake news disinformation.

Media and Tech Companies

Media and tech companies have most important role in the fight against fake news as they are currently main providers of information, including fake news. Their responsibilities have been recognized as crucial, but so far activities towards combating fake news were limited given the level of their involvement in providing and disseminating news.

Main activities media and tech companies can implement can be categorised in three categories:

1. detection and moderation,
2. transparency, and

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3 https://www.eeas.europa.eu/sites/default/files/action_plan_against_disinformation.pdf

3. user education.

Tech companies, especially social media platforms, bear the responsibility for detecting and moderating fake news on their platforms. This can be achieved through a combination of human intervention, artificial intelligence, and algorithms. For instance, Facebook employs a mix of AI and human fact-checkers to identify and flag false information, while Twitter has policies in place to remove or label tweets that contain manipulated media or false information. However, these activities are currently limited given the vast amount of information these platforms handle, and especially in light of recent layoffs in these companies and a lack of employees dedicated to these activities (for example, Twitter).

Transparency plays a crucial role in mitigating the effects of fake news. Media and tech companies should provide clarity about their policies on how they identify fake news, decide what to remove or flag, and how users can report or appeal against their decisions. Transparency can help build trust with citizens and users, and discourage fake news providers, especially if information on already detected providers of fake news is also part of the transparency procedure results.

Media and tech companies can use their platforms to educate users about fake news. This can include a wide range of activities, which are relatively easy to implement. Awareness campaigns, information on how to identify fake news, using fact-check information, interactive campaigns aimed at young people and children, debates, etc., are just some of many examples of such activities. Companies like Google are implementing several programs in line with these recommendations, but their reach is currently limited and needs to be in line with the amount of fake news present online. These

activities should include education providers, civil society, as well as governments.

Education and NGOs

Education institutions and non-governmental organizations (NGOs) can play a significant role in combating the spread of fake news and mitigating its impact on economic development.

One part of fake news is a result of good intentions where providers of news are not aware their opinion is based on wrong information or deduction. As mentioned, constant demand for news, given the speed of consumption and the number of providers, influences high demand for experts, analyst, news gest, etc. Many of them lacking knowledge on topics in question.

Education institutions and NGOs can play important role in educating primarily news providers in selecting experts and guests for relevant topics.

Schools and faculties can include media literacy into their curriculum, teaching students how to identify credible sources, understand media bias, and how to fact-check information. This refers not only to schools and faculties which include similar skills in curricula (research oriented faculties and schools) but all educational institutions.

NGOs should broaden activities towards impact of fake news on society and advocate for policies to combat its spread. Both education institutions and NGOs can run public awareness campaigns to educate the broader public about the dangers of

fake news. These campaigns can include workshops, seminars, online resources, and social media campaigns.

Impact of AI on Spread of Fake News

The impact of fake news on macroeconomic and microeconomic developments, as stated above, will most definitely be magnified by AI technology. The development of AI has made the creation and spread of false videos and stories very easy. This not only refers to 'deepfakes' in terms of photo and video editing. AI has a much more significant impact on the development of fake news in the segment of storytelling, the speed and the amount of news it can create in a short period of time, direct targeting of relevant information consumers, etc

Storyteller

Not only can AI deliver information faster and use different types of edited media (photo, video, audio), but it can also adapt the content and style of the story presented in an optimal way to influence consumer engagement and reactions.

AI technology is very quick in adapting to input it receives from a growing number of people communicating with AI through different types of applications and chats. AI learning from this communication is the main channel of its further development and will influence a better understanding of people's needs and communication methods, resulting in a much better approach in creating needed information. The use of AI in creating fake

information aiming to disrupt opinions and behaviour will be much more impactful than it has been without this technology.

The importance of understanding the speed and the level of adaptation of the AI to human behaviour must not be overlooked, even at this point of AI inclusion in everyday life. This should be addressed by policy makers and governments as soon as possible.

Deepfakes

AI algorithms, particularly those using deep learning techniques, can create highly convincing fake videos and audio recordings. These "deepfakes" can make it appear as if real people are saying or doing things they never did.

AI technology and programs producing this kind of information already exist, and they are producing information that the naked eye cannot evaluate as true or false. With the expected intense development of this technology, the impact of deepfakes will become even more significant on the dissemination of news in the future.

Automatization

AI can be used to automate the creation and distribution of false stories or misinformation on a massive scale. This can be achieved through bots on social media platforms that spread fake news stories, thereby creating a false sense of consensus or trending topics. The combination of mass spread of

information and the aforementioned possibilities of false news creation and adaptation to people's behaviour represents a high risk to both macroeconomic and microeconomic developments.

AI has the ability to disseminate false information about stock prices, including video-edited statements from company executives, and target relevant consumers through a variety of information-providing websites and applications in a short period of time. This could mislead investors into making incorrect decisions, as these decisions often need to be made quickly based on information provided from a multitude of different information-disseminating platforms, which with the support of the AI can indicate the occurrence of a fabricated event.

Targeted Disinformation

AI can also be used to tailor disinformation to specific individuals or groups, making the false information more believable to those targeted. This is achieved by analysing personal data to understand an individual's beliefs, biases, and vulnerabilities. The use of targeted disinformation is already present in the everyday lives of people using social media, with the most noticeable cases being the involvement of targeted information campaigns in the Brexit campaign and the 2016 United States presidential elections.

The Brexit and US presidential campaigns utilized significant resources and services of consulting companies specialized in providing such services at that time, such as Cambridge Analytica. AI has the potential to provide these services in the near future to every individual using it.

These trends will most definitely erode trust towards information on social media and restore the importance of traditional information providers (newsletters, TV channels, individuals, etc.). If people cannot trust that video or audio content is real, it becomes much harder to trust any information, leading to a potential "reality apathy" where people may start disregarding real news as fake. People will have to give their trust to different companies specialized in news providing, relying on their credibility.

AI is also being used to combat the spread of false videos and stories. For example, researchers are developing AI algorithms that can detect deepfakes with high accuracy. Social media platforms are also using AI to identify and remove fake news and misinformation from their platforms.

While AI has made it easier to create and spread false videos and stories, it is also a crucial tool in the fight against these threats. The challenge lies in staying ahead of the technology used to create deepfakes and ensuring that the public is educated about these issues.

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