Convergence Of Print Media In The Digital Age

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Abstract

The discussion carried out in this journal was to determine how necessary print media was to switch or converge into digital media. In addition to discussing the causes of the decline in the print media industry, this study also discussed the strategies carried out by several print media companies to transform into digital media. This convergence into digital media was also considered necessary because it supported the Sustainable Development Goals (SDGs), namely maintaining land ecosystems by reducing wood-based paper and environmental pollution due to paper and ink waste.

I. Introduction

The development of digital technology that has become increasingly massive in the last two decades has caused disruption and triggered various innovations and significant changes in various business and industrial sectors. The print media business, especially newspapers (newspapers), which have been a news industry in recent years, has also changed and must follow the development of digital technology trends so as not to be abandoned by readers and lose to their competitors. The consumption pattern of readers who follow the global phenomenon of accessing information through gadgets has forced some print media to convert their content and distribution to digital-based platforms. The change has more or less changed the business strategy carried out by media owners even though the journalistic quality is expected not to change. There are several content distribution models carried by publishers, namely in the form of online news portal websites, e-newspapers (digital newspapers), or social media channels.

Some of the problems behind the decision-making of media companies to converge are because:

1. The continuous decline in print media operations occurs due to:
    a. The change in how readers consume news and information that previously used mainstream media, namely newspapers, magazines, television, and radio. Currently, they use many news sources from digital platforms that are relatively free.
    b. And reduce interest in reading print media among the younger generation.
    c. The limited distribution area of print media makes it difficult to penetrate the market.
2. The high cost of production due to the increase in the price of paper, ink, human resources, and the increase in distribution costs has made the profits of print media companies fall even more. Meanwhile, increasing the selling price is a bit difficult because it is constrained by the decline in people's purchasing power and competition with free online media.
3. A decrease followed the decline in play in advertising revenue because clients felt there was a decrease in effectiveness when placing advertisements in print media.
4. Help maintain the continuity of the mainland ecosystem by following government programs related to Sustainable Development Goals (SDGs) by reducing pollution due

to paper and ink waste and reducing printing activities that use much raw paper derived from wood (trees) and ink.

The problems in the print media industry at home and abroad caused many companies to close their businesses after experiencing continuous losses. The efficiency carried out was unable to stop the losses suffered. Some companies are still trying to survive by transforming to digital platforms, but still, the income they get is not as significant as when print media still existed. Therefore, companies must find solutions and strategies and change their business patterns so that they can still survive in this digital era.

II. Review of Literature

Data from the Union of Newspaper Publishers (SPS) data was obtained that there has been a decreasing number of printed media in Indonesia. Since 2017, namely 793 titles, to 744 in 2018, then down again to 644 in 2019 and 2020 to around 593 titles. The decline was due to the sharp decline in the number of print media outlets since 2015.
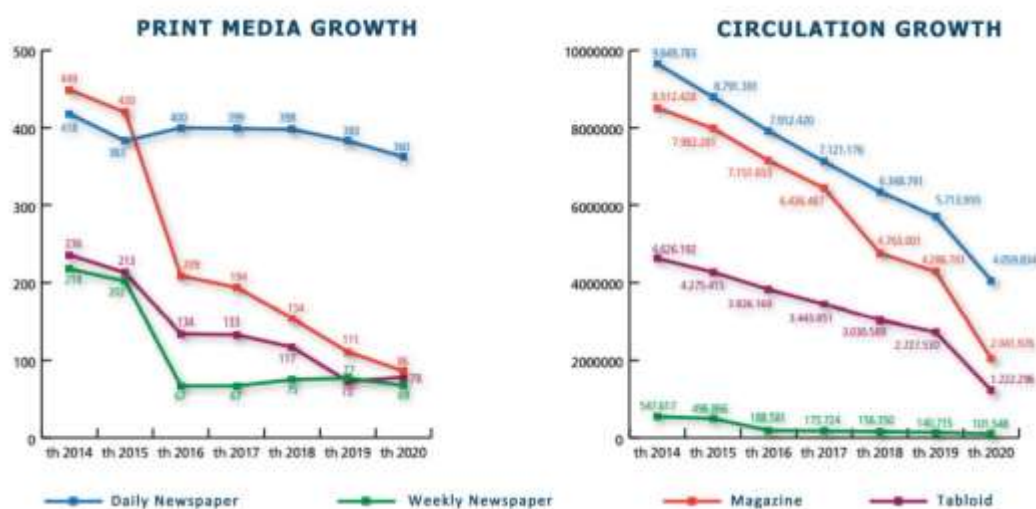

Figure 1. *Figure 1: Growth curve of the number of print media and print media in Indonesia*

NO	TYPE PRINT MEDIA	2017		2018		2019		2020	
		MEDIA	CIRCULATION	MEDIA	CIRCULATION	MEDIA	CIRCULATION	MEDIA	CIRCULATION
1	Daily Newspaper	399	7.121.176	398	6.348.791	383	5.713.910	360	4.059.834
2	Weekly Newspaper	67	173.724	75	156.350	77	140.715	69	101.548
3	Magazine	194	6.436.487	154	4.763.001	111	4.286.701	86	2.041.976
4	Tablod	133	345	117	3.030.589	73	2.727.530	78	1.222.296
TOTAL		793	13.731.732	744	14.298.731	644	12.868.856	593	7.425.654

Source : Media Directory 2020, Serikat Perusahaan Pers (SPS) Pusat, September 2020

Figure 2. *The Data on the number of media and print media circulation in Indonesia*

The statistical data obtained above shows that there is indeed a considerable disruption in the print media industry. According to Robertson (2005), newspaper subscriptions are declining as consumers realize they can read the same content online for free. It may lose revenue if a newspaper requires users to pay a subscription to read all content. Therefore, every print media publisher must immediately find a solution to maintain its existence.

Some of the efforts that can be made are:

1. It maintains and improves the quality of its journalism through high curation. Thus, readers will still trust the journalistic products they receive, so they do not turn to competitors' media.
2. Utilizing technology to converge from conventional media to multiplatform to be able to distribute content not only through conventional print media but also through digital media so that readers can get news quickly, not limited to location, and can actively contribute to the content read. Thus, the trust of readers will be built into the content.
3. Companies must be able to find new business patterns that still aim to make a profit (profit-oriented) so that the company can survive. Media companies that have been relying on revenue from the sale of print editions and the sale of advertisements conventionally need to find alternative marketing strategies that are for the digital era.

The development of the internet, accompanied by the rapid development of cellular phones with their intelligent features (smartphones), has rapidly changed the audience in obtaining and reading the news (Everett, 2011). Even the interactivity of social media on the internet makes consumers can also participate in the news, namely by actively spreading (sharing) and providing comments, criticisms, and suggestions.

This preference change has made many print media companies consider changing their business patterns and content distribution. One reasonable option is to converge to form a new medium, digital media. However, it must be understood that the change is not easy because many media companies still have difficulty changing the work culture of employees and the company. Even the print editorial team still sees online media as second-class media, especially regarding the quality of journalistic products. This assumption is due to the large number of online media that do not strictly curate their news products.

Media companies that want to switch to digital platform media must also prepare their infrastructure. Because IT plays a vital role, namely, in addition to being the foundation, IT also makes the business process of media companies more effective and efficient.

III. Research Method

The study aimed to outline how the print media business, especially newspapers, was shifting to technology and remaining a successful and credible source of news. The research took several examples of major media in Indonesia that had transformed into digital platforms.

A literature study was carried out to determine the transformation process that must be carried out in terms of infrastructure and business processes.

IV. Result and Discussion

The development of technology, especially computer and information technology (ICT), has taken a crucial role in encouraging human progress when communicating. Communication no longer has to meet and meet face to face but can be done within a radius of almost unlimited distance. The communication process is getting more practice with the support of increasingly cheap and sophisticated devices. The delivery of communication and the digital dissemination of information has experienced rapid development, especially after the discovery of the internet as a communication media

platform that is low-cost and can be widely developed. The internet has several characteristics as a new medium, namely:

● The Internet is not only concerned with the production and distribution of messages but also includes the processing, exchange, and storage of information data.
● New media is an adequately regulated (or not) public and private communication institution.
● Their performance is not as regular as the professional and bureaucratic mass media.

Changes in the communication model and information dissemination need to be addressed by media business people. Delays in making decisions to converge and digital transformation can make it difficult for the industry to grow market share and maintain consumer loyalty.

The print media industry's awareness of the dangers that threaten the sustainability of their business makes them have to transform into New Media, a combination (convergence) between traditional print media and digital platform media. Why keep conventional print media? The answer is that although a decline in play impacts the decline in advertising, the income from the digital world has not been as significant as the conventional media in its heyday. So, for a while, conventional media is still needed as business support until new media is ready to replace it.

It should also be realized that currently, there are still many readers who find it difficult to trust online news because currently, anyone can create a website and social media portal with news based on facts and hoaxes. This new system is very different from the news in the print edition, which has been rigorously curated by the editorial team and supervised by the Press Council.

With the still immense reader trust in press companies, the print media industry should immediately take a quick step by converging into a new media with a new monetization strategy as well.

4.1 Convergence Of Digital Platforms
a. Preparation of Information Technology Infrastructure

It is necessary to prepare information technology infrastructure to realize the convergence between print and digital platform media. As is well known that IT Infrastructure is like a backbone for the digital industry; therefore, the planning and implementation of IT Infrastructure must be carried out by considering the needs, costs, length of projects, and quality of devices. Here are the required devices:

1. *Server Cloud*

All media with a digital platform need a server as a place to store data and serve users/clients. Based on the physicality, the server can be divided into 2, namely:

● On-Premises (dedicated) Server: a server owned by yourself or leased in a data center (Colocation). For this type of server, a large enough IT team is needed for deployment and maintenance because complete control is in the hands of the server owner/user. Starting from the selection of server types (brands, processors, memory, storage), installation, network, and data security methods until it runs smoothly (running well) all become the direct responsibility of the IT team.
● Cloud Server: is a virtual server that runs in a cloud computing environment which is a technology for storing and processing data using internet resources. All the data needed is stored in a virtual space on the internet. The IT team needed is not too large because the server resources start from the physical server. Vendors have prepared and guarded operating systems, including the cybersecurity environment (cyber security). The user company only needs to install and set up according to its needs. Currently, many

vendors offer this service, including Amazon Web Services (AWS), Google Cloud, Alibaba Cloud, and those in Indonesia such as Cloudkilat and Cloudmatika.
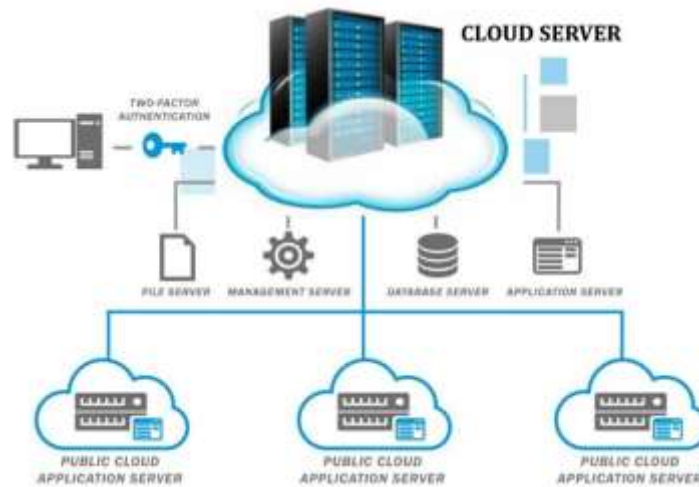

Figure 3. *Cloud Server Connection Layout*

For the needs of online media portals, many use Cloud Server as the primary server because:
1. It Does not require a significant investment because there is no need to buy a dedicated server but just rent according to user needs.
2. Quick and easy when installing with a variety of features and services that the vendor has prepared.
3. Does not require a large IT team to do setup and maintenance.
4. Network security is more guaranteed because it is well managed by vendors such as cloud server service owners.
5. Performance, durability, and reliability are more guaranteed because cloud servers are redundant with tens, hundreds, maybe even thousands of servers located in different places. Thus, the concept of Disaster Recovery Planning (DRP) as a mitigation concept for disaster risk can be represented by using this cloud server.
6. Access speeds to and from cloud servers are faster and guaranteed because vendors usually provide an enormous bandwidth because they work with various internet network providers.

The On-premises server still needs to be set up as a backup server to store the uploaded content on the Cloud server.

2. *Computer Network* **(LAN) and WAN + Internet**

Every company needs to prepare a computer network to manage data traffic for local access (LAN) and remote access (WAN / Internet). Some of the devices needed for computer networking are as follows:

- *Switch Hub: a tool that connects all device tools that access the server or between clients.*
- *Router: means connecting communication between computer networks at the exact location and at different locations or far apart.*
- *Access Point: devices that connect wireless devices (without wires) with the local network using Wi-Fi, Bluetooth, and wireless.*
- *UTP & Cabling: for local network connection can use UTP Cable or wireless (wifi/bluetooth)*
- *Firewall*: is a computer network security system in charge of monitoring, controlling and protecting the network from attacks and illegal access from within and from

outside. Attacks can be *hacking/cracking, viruses, malware, spam,*and other types of attacks. Firewalls can be hardware or software.
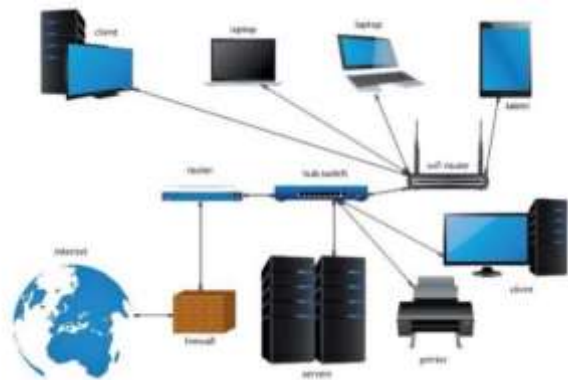

Figure 4. *Computer Networks & Devices*

3. Hardware

It is a device used to access data and send (upload) content to a news portal server. The device can be a Desktop PC, Laptop, or gadget (tablet or smartphone) equipped with access rights to computer networks and cloud servers.

4. Software (Application)

It is a computer program that is installed to perform certain functions. The software consists of procedures and instructions that make up a digitally formatted program. Some Software used by companies managing online news portals:
- Operating System (Ms. Windows, Linux)
- Browser Apps (Chrome, Mozilla, Safari)
- Content Management System (WordPress)
- Office Application (Ms. Office, Google Workspace)
- Design Graphics Application (Adobe CS)

b. Content Production (Newsroom)

The print media industry must be able to respond to digital disruption with sustainable digital transformation in addition to maintaining the loyalty of its readers and also expanding its audience. One of the strategies must be news content management policies that refer to the interests of various platforms (multiplatform).
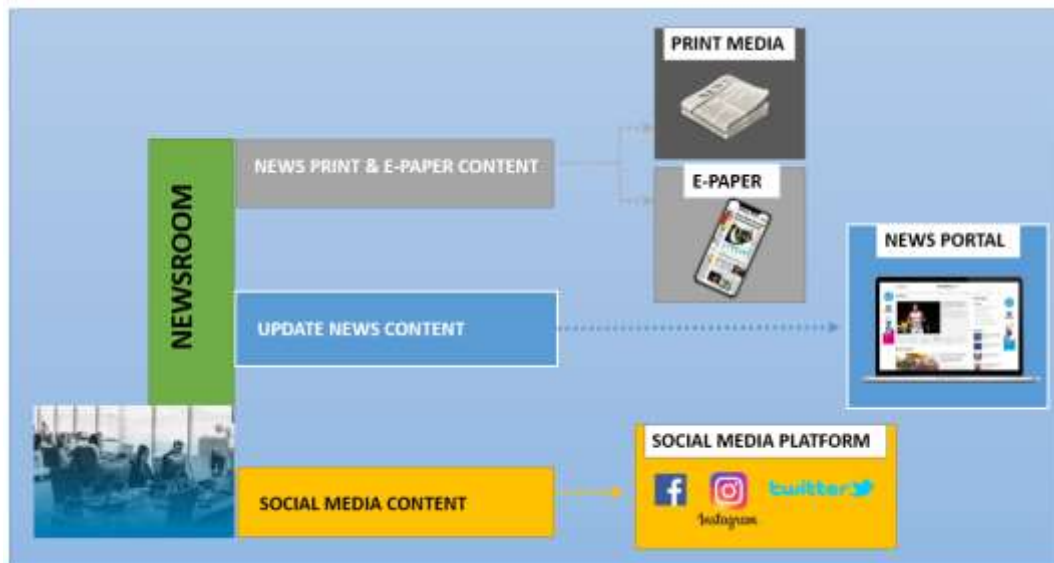
Figure 5. *Production of print and digital media content*

What needs to be realized is that although publishers have developed digital multimedia products with a focus on journalistic content, sometimes they are still not followed by the readiness of the editorial team to respond to these changes. Changes in work patterns and increasing the ability of the editorial team to produce real-time and up-to-date content without leaving the journalistic rules of the press industry are still often challenging to implement. Multimedia editors are required to be versatile (multitasking) and able to write news and produce reports in the form of videos.

In the proliferation of online news portals, the content production strategies that the media must apply to be able to survive and have a competitive advantage include, among others:

● Produce content that is related to or close to the reader. Content must be able to invite readers to make a positive contribution.
● Always be creative to create original content that readers like.
● Stick to journalistic idealism by constantly curating and Crosschecking news sources and avoiding content containing SARA and Hoaxes.
● Do adequate research before writing. Reading news that is rich in facts and data, as well as insightful, will be different from perfunctory news.
● Content produced by editors and creator teams for multiplatform use.

c. Content Distribution
1. Online News Portal Websites

Today almost every press company has an online news site. News sites are considered one of the efforts to maintain an audience and expand the penetration and distribution of news content. The ease of accessing news sites is strongly supported by advances in internet technology and the increasing variety of devices that can be used to access them. The distribution of conventional print media, which has been very limited due to distance constraints, time, and expensive distribution costs, makes online news sites the right choice.

With many news sites on the internet -because anyone can create a news site, the news sites created by press companies have more value. It is because the news content in them is made by editors consisting of journalists who have been verified by the Press Council so that they have high dedication and integrity to their profession and are bound

by the journalism code of ethics. The resulting product is high quality because it has undergone strict curation stages. All news must be accountable and free from plagiarism and fake news (hoaxes).

The success of a news site can be measured by the number of visitors (visitor traffic) to the site and the number of pages read (pageviews traffic). News sites must have a variety of strategies to increase the number of visitors and pageviews. The strategy that can be done is to implement Search Engine Optimize (SEO) and Search Engine Marketing (SEM).

● *Search Engine Optimizer (SEO)*

SEO is an optimization step taken so that a site's content can appear at the top of the rankings on Google pages when readers enter specific keywords on Google. Thus, the opportunity for the site to be selected by visitors becomes greater.

It is necessary to make efforts to increase the number of visitors and pageviews in addition to the interests of content distribution, also in line with business interests, namely to obtain as many advertising conversions as possible. SEO must continue to be run so that site performance can be maintained. The SEO done must be aligned with Google's constantly updated algorithms. The types of SEO that are generally applied are:

- *On-page SEO*: which focuses on content elements on a site page, such as meta description, title tag, image-alt, and splitting the article into multiple pages.
- *Off-page SEO*: efforts are made outside the site to support the higher visitors of the site. For example, by building link buildings, guest posts, and outreach marketing.
- *Technical SEO*: includes technical aspects to optimize the site technically, for example, maintaining the stability of site access, system security, page loading speed, and ease of access. The site's compatibility with the user's device also affects the success of SEO.
- *Local SEO*: efforts are made to increase the site's visibility in local search results.

● *Search Engine Marketing (SEM)*

SEM is a different optimization strategy than SEO. If SEO aims to get traffic organically, SEM uses a paid strategy so that the site always appears on the top page. If SEO takes a long time, SEM can quickly see the results. It is just that the company has to provide a cost budget that may be large enough for this SEM need. This SEM can use ads in Google Ads and other paid search engines. Usually, for sites that use SEM, the words "Ads" or "Ads" will appear on the top or bottom page of the search page.

Advertisers install SEM with relevant keywords so that when someone types in the keyword, the advertiser's site appears in Google search results. In that stage, there has been no cost incurred by the advertiser unless readers click on their site.

2. E-paper

Media with a background in print media can also publish their media products in digital form. Generally, in PDF or e-Pub format. With a design and appearance similar to print media. Media publishers simply create a site that holds the e-paper file earlier. So with one product, the publisher can produce products for two platforms, namely the print and digital versions.

The advantages of the digital edition of e-Paper compared to the print edition in terms of distribution are:

1. Published earlier than print media because after finishing the layout, it can be directly uploaded to the server and distributed.
2. On time because there are no obstacles in the distribution of shipments.

3. Can be read anywhere using a computer, laptop or smartphone, making it very easy for readers
4. The price is much lower than the print edition because there are no printing costs and minimal distribution costs (via the internet).
5. News and layout are the same as the print edition.
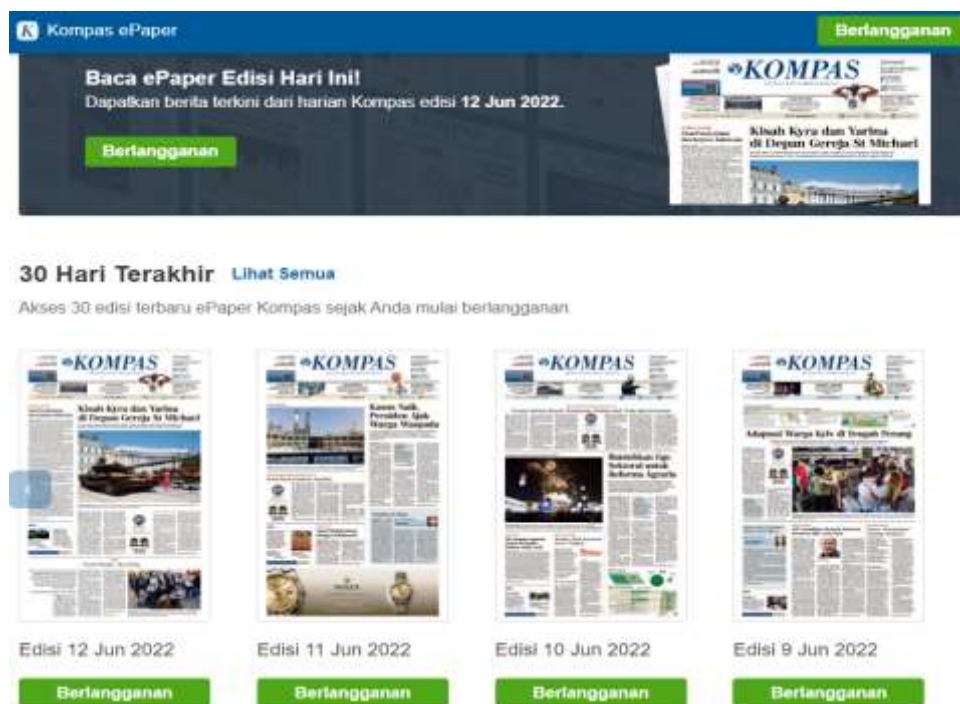

Figure 6. *Jawa Pos's e-paper*

Figure 7. *Kompas's e-Paper*

3. Social Media

Social media is one of the platforms that is also commonly owned by press publishers. With so many social media followers, this platform is considered a reasonably appropriate medium for distributing its content. Although currently, almost all social media applications have almost the same features in terms of function and purpose of use, social media can be divided into several classifications as follows:

1. Message-sharing app

   This application allows users to share messages in writing, images, and videos. This message-sharing application can be used personally or in groups. Examples of this popular application are Whatsapp (WA), Line, and Telegram.

2. Video-sharing apps

   The application is used to share content in the form of videos. Channel owners can gather followers in the form of followers or subscribers and try to create the best content to get as many viewers and subscribers as possible, in addition to increasing the credibility of the managed channels but also earning income from advertising. The owner of the canal can consist of an organization or an individual. Examples of this type of social media application that are popular are Youtube and Tiktok.

3. Activity-sharing applications.

   This application was initially formed to divide one's activities. However, organizations with business purposes can also be used in its way. In this application, account owners can share their daily activities in the form of daily activities, opinion thoughts, or news that is going viral. Followers of social media accounts can interact by submitting comments, suggestions, or complaints about the content of the content being spread. Examples of this type of social media are Facebook, Instagram, and LinkedIn.

4. Monetization Strategy

The primary purpose of creating a product is to profit for the company's sustainability business. Likewise, in the press industry, the goal is not only to maintain its existence with a broader distribution of content and to bind customers to be loyal. The most important thing is how the company continues to earn significant revenues and profits. The convergence into digital media should not erode the company's gains and profits. It is hoped that the convergence steps taken can open loopholes to obtain new sources of income. Therefore, companies must find new business models in the digital world by paying attention to existing industry competition. Each product produced should be able to come up with new business patterns and strategies to make money, called Monetization Strategies.

a. Online News Sites

   The source of income from Online News Sites is generally advertising revenue. There are several types of advertising revenue that managers of online news sites can earn:
   Based on how to obtain it, ads can be categorized into two, namely:

- Programmatic Ad: is an advertisement obtained in collaboration with Ad Agency as a partner, for example, Google, AdMax, Grid, and others. Site owners provide advertising slots on their site, and partners will place ads belonging to their clients. At the end of the month, the advertising income will be calculated, and the profit share will be calculated. How to calculate advertising turnover depends on how many visitors are on the site and the activity carried out by visitors. Unit parameters calculate advertising costs:

- *Cost Per Mile (CPM)* : is how much the advertiser has to pay for every thousand accesses.
- *Cost Per Mile (CPM):* is how much the advertiser has to pay for every thousand viewers.
- *Cost Per Click (CPC)*: is how much the advertiser has to pay for each activity (click) by the viewer.

- *Click Through Ratio (CTR):* This system refers to the calculation of the number of times a user clicks on an ad or site name and is compared to the total number of visitors who saw the ad. This ratio is to find out the minimum on the ad and translate into how much it costs the advertiser should pay.

Many other parameters are the measurement of advertising rates, but they must be adjusted as well as the capabilities and capabilities of the website.

● *Direct Ad:* is an advertisement obtained directly by the Business Team without going through an advertising agency. Generally, the gain from Direct Ads is more significant than programmatic because, in addition to higher rates, there is also no profit sharing with the agency. The company must have a team of business units with a marketing strategy and design the types and rates of advertisements, both units, and packages that are attractive to advertisers. The Business Team must be thoroughly familiar with the products it sells (product knowledge) and know competitors and market conditions.

By Ad type

● *Banner Ad*: in the form of digital ads appearing in the website's header, footer, or sidebar. This advertisement is a type of digital advertising aiming to brand awareness to customers.

● *Advertorial* is an advertisement in the form of an article/text that discusses the product or company belonging to the advertiser. The writing style is made as smooth as possible but can influence the reader to buy goods/services or follow the author's wishes imperceptibly.

● *Infografis ad* is an advertisement in the form of graphics that contains the data desired by the advertiser. Advertising in this graphic form must provide a brief description of the points to be conveyed to the reader.

● *Video Ad*: is an advertisement in the form of a video. Advertising can be the promotion of products and services or other materials that users want to convey to the audience.

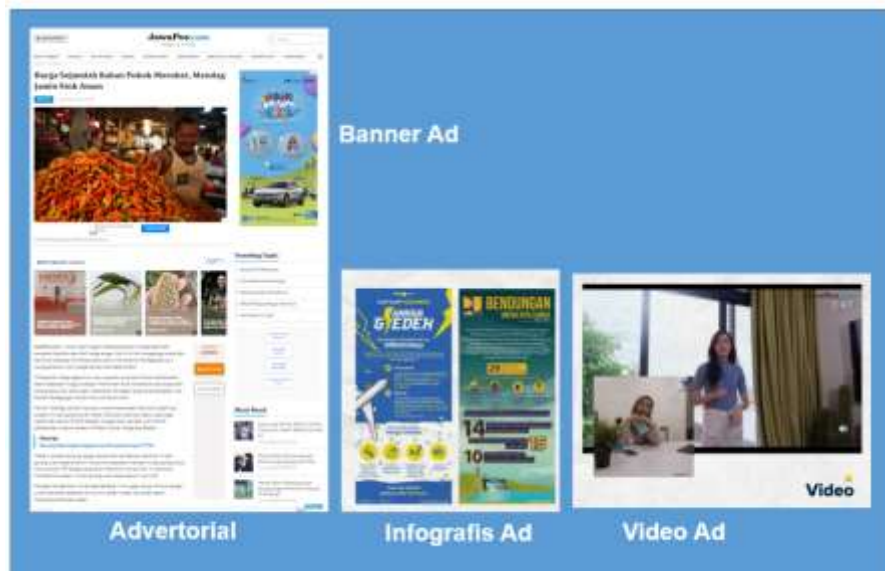● *Native Ad*: Ads that aim to attract readers to enter other sites.

Figure 8. *Types of Ads on Online News Sites*

b. E-paper

E-Paper's revenue is through subscription fees from its readers. Unlike general news sites, for this e-paper, readers must buy first to be able to read the content in it. The

business method is similar to the print media business method, except that the tariffs are cheaper because they eliminate high printing and distribution costs.

Advantages for customers:
- Cheaper price.
- Can make payments by digital means (credit card, virtual account, bank transfer, and QRIS).
- Flexible, readable anywhere and anytime.

Benefits for Publishers:
- Cash-in is smoother because customers pay first before they can enjoy the content. Unlike print media, where customers usually pay after receiving the product.
- Business management process is more straightforward and measurable with unlimited income because there are no restrictions on the number of products and restrictions on sales areas.

c. Social Media

Revenue from social media channels managed by publishers can be in the form of advertisements and endorsements. This advertising opinion can be obtained directly both through social media platforms (Facebook, Google Adsense) and can also be obtained by agencies and direct sales. What needs to be known is that the revenue depends on the amount and quality of content produced and the number of visitors (viewers) and followers (followers and subscribers) of the channel owner. One of the potential incomes from social media is to create a podcast channel or live talk show. When podcast and talk show events are held, they can be supported by sponsors.

Figure 9. Paid live streaming content

V. Conclusion

In the author's opinion, conventional print media in Indonesia can no longer ignore industrial disruption due to the rapid advancement of technology in the past decade. Mainstream media must change immediately and adopt existing technology to maintain reader loyalty and business existence by making digital-based products. Print media must eventually "come to terms with the inevitable future of high technology" (McKenna, 1993, paragraph 11). Technology may change how news is delivered, but newspapers remain as focused as ever on delivering quality journalism that readers trust (Palser, 2006, page 62).

It is of the three examples of digital transformation products that have been carried out by many media in Indonesia, namely creating an online news website, joining social media, and creating an e-Paper which is a digital version of print media. Readers' need for news in digital format from trusted sources has been met. Customers who may have

initially begun to be reluctant to use expensive and non-flexible print products can immediately switch to the digital platforms provided by the same publisher.

From the customer side, digital news products must be able to deliver news to customers with unlimited distance and time quickly, become interactive media, and support the participation of their readers.

Nevertheless, there is something to consider in this transformation process besides the change in the business process, namely the monetization strategy. Many media companies that have entirely switched to digital media have experienced business difficulties, so they are forced to lay off their employees, and some are even forced to close their companies. It seems that with an improper business strategy, the digital transformation carried out will cause losses for media companies. The right business strategy for digital media companies still has to be sought, explored, and developed for the sustainability of media companies.

In terms of technology, it is still difficult to guess which direction technology will develop. Hence, it is also difficult to measure the future of the print media business. However, information on the development of both print and digital media from the past and present will help make predictions about trends in the media business.

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