

# Empirical Research on the Risks of New Media in Marketing in 5G Era

Manlin Liu<sup>a</sup> and Lei Liu<sup>b</sup>

Ph. D Student of Global Business Department, Seongnam, South Korea

<sup>a</sup>Sherly616@naver.com, <sup>b</sup>wa4762@gmail.com

The two authors made the same contribution

**Keywords:** 5G Era; New Media Release; Marketing; Empirical Research on Risk

**Abstract:** Human has officially entered the risk society, surrounded by a variety of risks, risk has become the theme of human life. In the risk society, human beings are highly dependent on mass media, which plays a vital role in the process of social development. Through risk communication, all sectors of society can jointly cope with the risks of globalization and ensure the continuous and stable progress of modernization. In this experiment, M Media, a local media company, was randomly selected to discuss the marketing risks of new media in the 5G era through two research methods of literature research and empirical analysis. Experimental data show that the advertising department of M Media still needs to make reasonable development of advertising time to occupy a place in marketing. The experimental results show that the increase of advertising time (points) and advertising time (%) of M media in channels 1, 2, 3 and 4 in the market is 67,890 and -12, respectively. 60234, 8; 52348, 10; 44904-6. Through the research of this paper, it is found that new media break through the limitation of time and place, with more fragmented content, more accurate recommendation to the audience, and better communication effect. In addition, the content published by new media is more casual, and users can edit and publish it by themselves, which is more flexible than traditional media content.

## 1. Introduction

In the traditional market, the amount of demand is determined by production, which is also included in the previous market economic system [1]. This means that supply is more dominant than demand. With the rapid development of the society, people's life is getting better and better, and the demand side gradually takes the dominant position, which makes the allocation of resources more free rather than the previous decision by supply. However, this also greatly increases the risk of the market [2, 3]. To reduce this risk will have to be a detailed marketing plan ahead of a class, to perfect the market mechanism of crisis management, can make the market healthy operation, each brand's own competitiveness, in today's competition, the greater the still can get a lot of economic benefits, at the same time, through the analysis of the risk can be better clear positioning in the market, in a timely manner to adapt to the [4, 5].

Hidayat et al. believe that new media is a new media form based on computer information processing technology. At present, although there are still different views on the definition of new media in the academic circle, on the whole, most scholars agree that new media is a modern high-tech form of media based on digital, information and communication technologies, such as network media, mobile media, mobile media and micro-media [6]. Paetz led scholars believe that individuals, groups and institutions of a mutual exchange of information to deal with the method of risk is the risk communication, risk of this information is not only confined to the word, there are a variety of elements of influence and decide the direction of the market risk, including the competition information and the nature of the risk, time, etc. This information is critical and can determine the future direction of the organization [7].

In today's market model, new media has many advantages and is being paid more and more attention by others. Therefore, the use of new media in marketing is of increasingly important strategic significance [8, 9]. The convenience of new media can make marketing faster, and new

media can also reduce the traditional material consumption and lower the cost. It has been proved by practice that the marketing of new media will have good marketing effect [10].

## 2. An Empirical Study on the Risks of New Media in Marketing in the 5G Era

### 2.1. Research on 5G Technology

In recent years, 5G has also become a trend increasingly pursued by people and a hot issue pursued by academia, commerce and communication fields. This communication technology is an extension of the previous 1G-4G with faster speed and larger capacity, which can be said to promote the Internet to a new speed.

Present Internet industry rapid development, more and more mobile terminal access to the mobile network, the different service takes network is more and more of a "valley", so the mobile data traffic surge is inevitable, said one thousand times increased a little too much, at the same time the network energy consumption and cost of network construction is becoming more and more high, at the same time increasing flow also have more request for a variety of hardware, spectrum analysis, etc have also been more and more attention, in what is now the spectrum has almost become a scarce, large span between different spectrum, trivializes situated, is difficult to effectively utilize network resources. In addition, due to network resources is too crowded, must also be optimized, for both businesses and individuals must make the best of network resources optimization and it is also a kind of promotion network capacity from the side, make a method of high speed network, at the same time, faster speed can be very good to improve user experience, all these reasons are 5 g the quick and the main reason why more and more hot.

### 2.2. Discussion on the Functions of the Mainstream Media in Risk Communication

Around 1920, Lippmann proposed a new concept, namely "mimicry environment". In other words, we live in a world of two environments. One of them is the real environment that people can personally experience, the other belongs to the "mimicry environment" that the mass media has filtered out, which belongs to a kind of virtual environment that people can't experience. However, the "simulated environment" presented by media is the basis for people's understanding of the display environment. In other words, instead of directly connecting with the real environment, it is better to move back and forth between the real environment and the virtual environment, and it can integrate the real environment and the virtual environment to guide decision-making and action. If all aspects of people's social production and life cannot be separated from mass media, people rely heavily on mass media to guide their actions into the "mimicry environment" presented by the media. The boundaries between real and virtual environments are becoming less and less clear.

The media, especially the broad, authoritative, credible and influential mainstream media, is at the core of today's society. In a normal society, Raswell proposes the "three functions" of mass communication: environmental monitoring, social coordination and the inheritance of social heritage. On this basis, Wright added the function of "providing entertainment" and formed "four functional theories" in the general society.

### 2.3. Empirical Analysis Method of Risk Parity

Risk parity refers to the optimization of the risk composition of a portfolio by evenly distributing the risk weight of various assets in the portfolio. Risk parity allocation makes portfolios less sensitive to individual assets and allows people to achieve ideal returns based on controllable risks. Compared with the traditional asset allocation model, the risk parity model can effectively reduce the impact of some asset fluctuations on the portfolio, thus achieving investment diversification and stable growth of asset value.

$$\sigma_p = \sqrt{\sum_{i=1}^M w_i \sigma_i^2 + 2 \sum_{i=1}^M \sum_{j>1}^M w_i w_j \sigma_{ij}} \quad (1)$$

Where, WI represents the weight of asset I in the portfolio, P represents the standard deviation of

the portfolio,  $I_{ij}$  represents the covariance of the return between asset I and asset J, and  $2i$  represents the standard deviation of the return on the asset.

Take partial derivative of Equation (1) with respect to  $W_i$  to obtain the marginal risk contribution of asset I to the portfolio:

$$MRC_i = \frac{\partial \sigma}{\partial w_i} = \frac{w_i \sigma_i^2 + \sum_{j=1}^M w_j \sigma_{ij}}{\sigma_p} \quad (2)$$

The meaning of Equation (2) is the influence of weight change of asset I on portfolio risk.  $MRC_i$  represents the marginal risk contribution of asset I to the portfolio. By multiplying both sides of Equation (2) by  $W_i$ , the total risk contribution of asset I to the portfolio can be obtained as follows:

$$TRC_i = w_i \frac{\partial \sigma}{\partial w_i} = \frac{w_i^2 \sigma_i^2 + \sum_{j=1}^M w_i w_j \sigma_{ij}}{\sigma_p} \quad (3)$$

The left side of Equation (3) represents the overall risk contribution of asset I to the portfolio. By adding both sides of Equation (3), the following equation can be obtained:

$$\sigma_p^2 = \sum_{i=1}^M TRC_i = \sum_{i=1}^M w_i \frac{\partial \sigma}{\partial w_i} \quad (4)$$

The core idea of the risk-parity strategy is to equalize the risk contribution of each asset in the portfolio.

## 2.4. The Significance of Marketing in the New Media Era

(1) Marketing is more convenient in the new media era

The new media era based on the powerful background of the Internet will enhance the convenience of marketing. Based on "we media", communication between customers, between customers and merchants, and between merchants and merchants can be carried out almost anytime and anywhere. At the same time, companies can publish their messages on Internet platforms (such as social media) anytime, anywhere, making their messages more targeted.

(2) Lower marketing costs in the new media era

The marketing cost in the new media era is far lower than that of traditional media. When using traditional media for marketing, people cannot accurately find the target group, so people need to invest more advertising money to achieve better marketing results.

(3) It is easier for marketing to achieve good results in the new media era

Smartphones are becoming increasingly popular in this new media era. The Internet has become a part of People's Daily life. People of all ages are increasingly dependent on the Internet, and companies are increasingly marketing through new media. Compared with traditional media, the public is more involved in new media marketing.

## 3. Empirical Research Experiment on the Risk of New Media in Marketing in the 5G Era

### 3.1. Experimental Background

Under the background of new media, Internet high-tech technology has provided great advantages for people's life. Meanwhile, businesses are also facing more competitive pressure. In this regard, businesses should change the concept and way of marketing, more active and more targeted marketing. Businesses should make full use of new media for marketing by means of web pages, mobile apps, and screen advertisements. At the same time, in the current era of rapid development, businesses should pay close attention to the development trend of new media, and adjust their marketing strategies according to the latest form of policy.

### 3.2. Experimental Research Methods

In this paper, a local media company, M Media, was randomly selected for the experiment, and two research methods, literature research and empirical analysis, were used for the experiment. Through the in-depth study of industry policy, guild regulations, and the correlation project papers, newspapers, literature research to get firsthand material, and a comprehensive and correct understanding of the traditional media, new media and 4 p marketing theory, to ensure that designed by the media company to investigate fusion based on the traditional media and new media marketing can be effective implementation strategy is improved.

### 3.3. Experimental Research Purpose

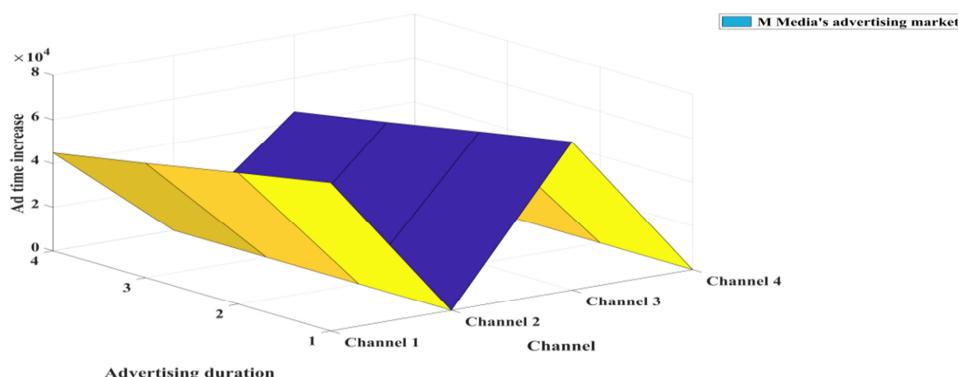
Taking the development of contemporary media as the starting point, this experiment elaborated the necessity of the integration of traditional and new media, discussed the development status quo of traditional and new media, and compared and analyzed the respective advantages of current traditional media and new media. This paper summarizes the integration system of traditional media and new media, analyzes and studies how to carry out marketing work after the integration of traditional media and new media.

## 4. Empirical Research and Discussion on the Risk of New Media in Marketing in the 5G Era

(1) In the future, the overall working idea of the advertising department should be to stabilize broadcast customers and attract new customers by innovating advertising products and increasing customized activities. On this basis, the professional degree of employees should be improved and the revenue generated by advertising should be increased through diversified and multi-channel approaches combined with all departments of the channel. Due to the restrictions imposed by the State Administration of Radio, Film and Television (SARFT), the advertising time of major SATELLITE TV stations has been affected, and generally speaking, the trend is downward. The experimental investigation shows that the advertising market of M Media is shown in Figure 1 and Table 1. In the future, the advertising department still needs to develop the advertising time reasonably to occupy a place in the marketing.

**Table 1.** M media's advertising market

Channel	Advertising duration (minutes)	Ad time increase(%)
1	67890	-12
2	60234	8
3	52348	10
4	44904	-6



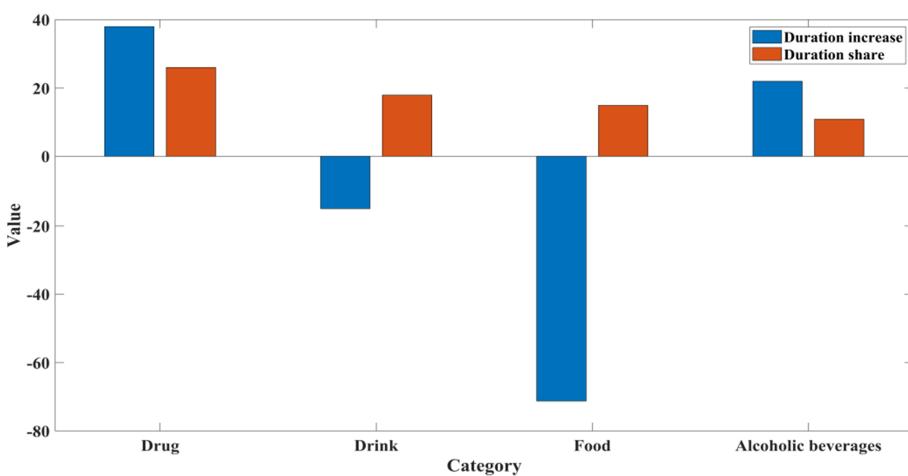
**Figure 1.** M media's advertising market

(2) From the perspective of advertising marketing category, the advertising duration of M Media

Henan TV in the pharmaceutical, beverage, food and alcoholic beverage industry ranked first during the survey period, as shown in Table 2 and Figure 2. Because in the past, M media was the majority of TV programs for middle-aged and elderly people, so there were a lot of drug advertisements. In the future, M Media has targeted its marketing at young people, so the number of drug advertisements should not be controlled, while food and financial advertisements need to be increased.

**Table 2.** M media advertising marketing categories

Category	Duration increase (%)	Duration share (%)
Drug	38	26
Drink	-15	18
Food	-71	15
Alcoholic beverages	22	11



**Figure 2.** M media advertising marketing categories

## 5. Conclusion

This experiment is carried out based on empirical analysis and literature research. The experimental results show that the increase of advertising time (points) and advertising time (%) of M media in channels 1, 2, 3 and 4 in the market is 67,890 and -12 respectively. 60234, 8; 52348, 10; 44904-6. Although marketing risk cannot be eradicated, it can be reduced as much as possible. We should pay more attention to marketing risks, standardize the content of marketing activities, conduct marketing preparation activities in detail, analyze and determine the market positioning of products, establish a sound marketing risk prevention mechanism, reduce the negative impact of marketing risks, improve the market competitiveness of enterprises, and obtain greater economic benefits.

## References

- [1] Bader F, Martinod L, Baldini G, et al. Future evolution of public safety communications in the 5G Era [J]. Transactions on Emerging Telecommunications Technologies, 2017, 28(3):e3101.
- [2] Gomez-Barquero D, Lee J Y, Ahn S, et al. IEEE Transactions on Broadcasting Special Issue on: Convergence of Broadcast and Broadband in the 5G Era [J]. IEEE Transactions on Broadcasting, 2020, 66(2):383-389.
- [3] Chan W T Y, Leung C H. An Empirical Study on the Effective Usage of Emojis in Marketing Communication [J]. The International Journal of Technology, Knowledge, and Society, 2019, 15(1):1-18.

- [4] Zhang J, Mao E. Cash, credit, or phone? An empirical study on the adoption of mobile payments in the United States [J]. *Psychology & Marketing*, 2020, 37(1):87-98.
- [5] Wei J, Wang Q, Yu Y, et al. Public engagement in product recall announcements: an empirical study on the Chinese automobile industry [J]. *Journal of Marketing Communications*, 2019, 25(4):343-364.
- [6] Hidayat R N, Poernomo E, Waluyo M, et al. The model of risk of travel ticket purchasing decisions on marketing communication mix in online site using structural equation modeling [J]. *International Journal of Civil Engineering and Technology*, 2018, 9(5):847-856.
- [7] Jürgen Paetz. The Risk of Optimization in Marketing Campaigns [J]. *International Journal of Business Analytics*, 2017, 4(4):1-20.
- [8] Kuzmanova Y, Nacheva I, Koleva V P, et al. Public awareness of risks and recent marketing dynamics of Pond sliders (*Trachemys scripta*, Schoepff, 1792) in NE Bulgaria [J]. *Zoology and Ecology*, 2018(112):2165-8013.
- [9] Babalola F D, Ayinde O E, Chirwa P W, et al. Risks and coping strategies of production and marketing of cocoa in Ondo State, Nigeria [J]. *Agroforestry Systems*, 2017, 91(2):211-220.
- [10] Ilieva J, Baron S, Healey N M. Online surveys in marketing research: pros and cons [J]. *Manchester Metropolitan University*, 2018, 44(3):361-376+382.