

# Research on the Relationship between China's Book Publishing Industry and Performance Management from the Perspective of 5g Network

Wei Xia

Wuxi Taihu University, Wuxi, Jiangsu Province, China

**Keywords:** Hypermedia narrative mode, Book publishing, Performance management, Factor analysis

**Abstract:** With the vigorous development of digital information technology, modern science and technology with coexistence of interactivity and technology, that is, 5G network technology, is quietly changing people's reading methods and book consumption. In order to increase the reading volume of books per capita in China and promote the sustainable development of the book publishing industry, this study used factor analysis to explore the interaction between book publishing and performance management under the hypermedia narrative mode. Against the background of 5G network, the application of technology and other related content was also be analyzed, a testable relationship model was constructed. The results show that the organizational innovation and content production contained in the book publishing hypermedia narrative model all have path coefficients, indicating that the control and optimization of the above-mentioned dimensional variables is one of the powerful means to improve corporate performance.

## 1. Introduction

5G network refers to the 5th generation wireless systems (5G). As the latest generation of cellular mobile communication technology [1]. 5G network has the advantage of high data rate. Compared with 4G network, its data transmission rate has sped up hundreds of times [2]. The main function of 5G network is reflected in reducing delay, saving energy, increasing system capacity, and connecting multiple devices on a large scale to conduct interactive and responsive network activities, so its application is extremely wide [3-4]. The traditional book publishing model can no longer fully satisfy people's increasing reading needs. It is an innovative way to integrate 5G network technology into the book publishing model to construct a new hypermedia narrative model, which can use media channels to access relevant media content resources, make effective and reasonable distribution, and then adjust the information flow [5]. Book publishing under the hypermedia narrative model refers to the flexible application of the hypermedia narrative model to the process of book publishing, so that the two can be organically combined, the relevant technology and content can be perfectly matched, and the spread of book information content can be realized and operated. The hypermedia narrative model of book publishing has more significant distributed and interactive features, and its control ability is strong [6]. In order to increase the market share of books and publications, publishers and creative teams need to change their marketing strategies to make the published works more in line with the popular trends of the publishing market.

## 2. Book Publishing and Business Model Innovation under the Hypermedia Narrative Model

From the perspective of the hypermedia narrative mode, traditional book publishing has been unable to adapt to the current development environment of people's reading needs, so the transformation and innovation of book publishing business models are particularly important [9]. In this research, social and reading are combined to build a social book publishing platform, so that readers can not only enrich their own knowledge structure system, but also realize reading sharing and understand the reading of social friends during the reading process. Habits and preferences can also enable others to understand their own reading situation, and further promote the good

development of social relations [10]. This kind of book publishing business model has rich content resources, a very high literary reserve, and the presentation of book publishing also has a certain diversity. In addition to traditional e-book reading, it also includes contracted lectures and audio novels, etc. The form can maximize people's interest in reading and the desire to buy books for publication [7]. In addition, this business model can make book publishing no longer a single system, but into a connected social way [8]. In the process of reading, you can find other people's perception of books, and you can also add experience or annotations to books to form a social reading mode of ring installation. The innovation of this business model can bring people a natural and close user experience, from self-promotion to extensive independent communication and recommendation between users, and even achieve the pursuit of this business model.

### **3. An Empirical Analysis of the Hypermedia Narrative Model of Book Publishing on Business Models and Performance**

#### **3.1 Model Construction and Confirmatory Factor Analysis**

In order to further analyze the content structure of the book publishing hypermedia narrative model, the "2-3-6" model was constructed in the study. This model is a digital interactive model, which is all-encompassing and basically covers related applications in the digital interactive service industry. The "2" in the "2-3-6" model refers to two different levels, namely the content level and the channel level; the "3" refers to the three links contained in the different levels, a total of "6" links, in which there are manifestations of value creation and increment. According to this model, the relevant links in the business model of book publishing under the hypermedia narrative mode are designed. Among them, the three links included in the content layer are content production, packaging and marketing; the three links in the channel layer are respectively data transmission, distribution service and user interface. In detail, the content production in the content layer refers to the integration of the nested relationship between the published content and the media, and the aggregation relationship with the user-produced content in the corresponding process. The focus of content production is on the originality and digital processing of book publishing content. Content packaging mainly includes two types of digital packaging and paper packaging, including editing, art and other technologies, which is the basis for reprocessing the book publishing content. Content marketing is essentially It is an effective marketing strategy that uses content with strong appeal, high continuity, and a certain value to dig out multi-level and multi-faceted user groups, and make users germinate purchase intentions. The data transmission in the channel layer is to promote the cross-border integration of the hypermedia narrative mode of book publishing through network information technology. Data transmission has a strong external power for it; the distribution service plays a role in the improvement of business performance in book publishing. The key role is to complete the production, packaging, and delivery of book publishing stories through subscription, marketing, packaging and other services, thereby completing the perfect transformation of the industry's business model. The user interface is a kind of man-machine interactive technology, which covers a wide range, can push the relevant information of book publishing in real time, and aims to give users a wonderful sensory experience.

In order to verify the accuracy of the measurement and estimation of this model, confirmatory factor analysis (CFA) was carried out through the likelihood estimation method. The analysis objects include five aspects, book publishing under the hypermedia narrative mode, business performance, the market knowledge capability index, the innovation environment, and the trust index. The ideal range of the  $\chi^2/df$  ratio of the measurement model is between 2 and 5; the value of AGFI is infinitely close to 0.90, or even equal to 0.90; the value range of RMSEA is less than 0.08. The value range of the remaining indicators of CFI, NFI, GFI, and IFI is above 0.90. When the range of values of all indicators does not meet the conditions of the corresponding indicators above, it can indicate that the measurement model and the relevant data have a good degree of fit. In the book publishing part of the hypermedia narrative mode, the confirmatory factor analysis results are shown in Figure 1.

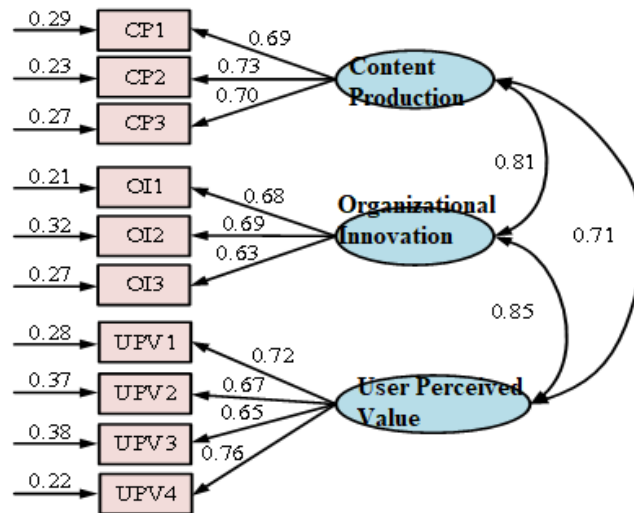


Fig.1 Confirmatory Factor Analysis Results of Book Publishing under the Hypermedia Narrative Model

A detailed analysis of Figure 1 shows that in the process of confirmatory factor analysis, there are three analysis focuses on book publishing under the hypermedia narrative model, namely content production, organizational innovation, and user perceived value. The results show that the value of  $\chi^2/df$  is 2.4, which is within the ideal range; the value of AGFI is 0.895, which also meets the ideal conditions; the value of RMSEA is 0.032, which is less than 0.08; the values of CFI, NFI, GFI, and IFI are 0.952, 0.937, 0.903, 0.938, all of which are greater than 0.90. The above results show that the measurement model of book publishing under the hypermedia narrative mode and the related data have good adaptability and fit. Due to space limitations, the remaining four aspects of the analysis object will not be elaborated here. The relevant indexes of the confirmatory analysis and fitting are shown in the following table (Table 1).

Table 1 Confirmatory Factor Analysis Fit Index

Fit index		$\chi^2/df$	AGFI	RMSEA	CFI	NFI	GFI	IFI
Measured value	Business performance	2.7	0.911	0.042	0.927	0.962	0.965	0.944
	Market knowledge capability	2.4	0.897	0.044	0.926	0.977	0.946	0.925
	Innovation environment	2.6	0.901	0.022	0.922	0.982	0.987	0.993
	Trust	2.8	0.894	0.067	0.957	0.932	0.951	0.955

The  $\chi^2/df$  values of economic performance, market knowledge capability, innovation environment, and trust in Table 1 are 2.7, 2.4, 2.6, and 2.8, which are all in the ideal fitting range; the AGFI values are 0.911, 0.897, 0.901, 0.894 respectively, all meet the requirements of the ideal state, infinitely close to 0.90; the values of RMSEA are 0.042, 0.044, 0.022, 0.067, which are lower than 0.08, reaching the ideal state; the values of CFI, NFI, GFI and IFI meet the conditions and are greater than 0.90. It can be seen from this that in confirmatory factor analysis, there is a good degree of fit between all measurement models and their corresponding data.

### 3.2 Data Analysis of the Impact of Book Publishing Hypermedia Narrative Mode on Performance Management

In the book publishing hypermedia narrative mode, there are three dimensional variables, and there is an overall positive correlation between them and the two dimensional variables in business performance. This shows that on this basis, it can be further incorporated into the structural equation for diversified regression analysis. The structural equation model analysis is shown in Figure 2.

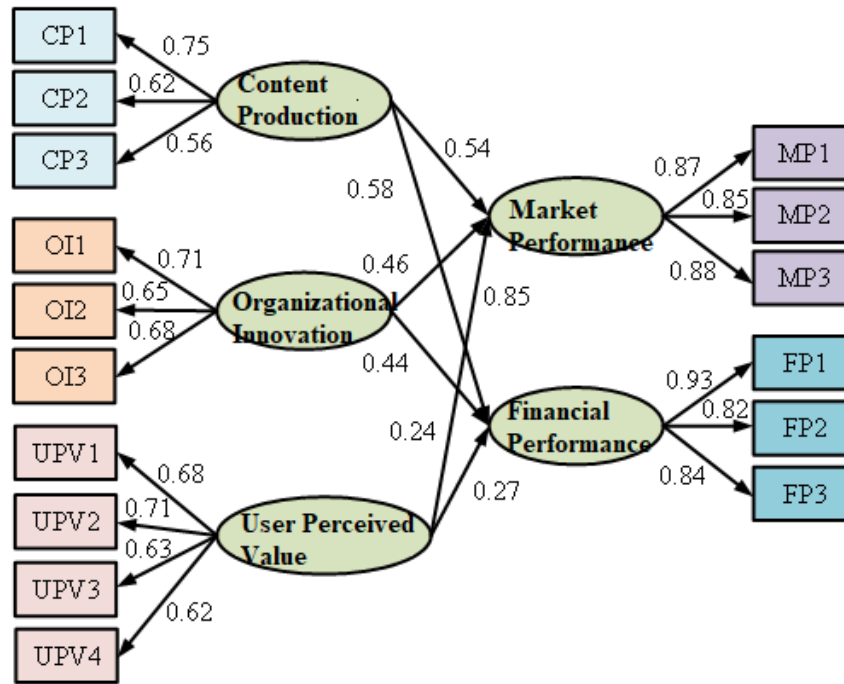


Fig.2 Structural Equation Model Analysis of Book Publishing and Business Performance under the Hypermedia Narrative Model

Figure 2 shows the multiple regression analysis between the book publishing hypermedia narrative model and business performance, where the independent variable is the former and the dependent variable is the latter. The related variables of different dimensions in the former have completely different effects on business performance. Through analysis, it can be seen that the regression coefficient of content production in the book publishing hypermedia narrative model is 0.441, and the significance level is 0.000; the regression coefficient of organizational innovation on business performance is 0.227, and the significance level is also 0.000; and the value of user perception Part, the regression coefficient is 0.169, and the significance level value is 0.014. The above data shows that the relevant variables of these three dimensions all have a non-negligible impact on business performance and are of strong significance. The value of  $\chi^2/df$  is within the ideal interval, which is 2.4; the value of AGFI is 0.895; the value of RMSEA is 0.036, which is less than 0.08, which satisfies the ideal situation; the values of CFI, NFI, GFI and IFI are 0.917, 0.947, 0.946, 0.956, which are all greater than the critical value of 0.90. In terms of the overall situation, the model constructed in this study has a good degree of fit and can perform a higher degree of completion of the inspection work. The inspection results are as follows (Table 2).

Table 2 Model Test Results of Book Publishing Hypermedia Narrative Mode and Business Performance

Type	Market performance	Financial Performance	Market performance	Financial Performance	Market performance	Financial Performance
	←	←	←	←	←	←
	Content production	Content production	Organizational innovation	Organizational innovation	User Perceived Value	User Perceived Value
Path coefficient	0.53***	0.57***	0.45***	0.43***	0.23***	0.26**
T value	5.6	5.1	3.2	3.3	2.8	2.2
Is it significant	Yes	Yes	Yes	Yes	Yes	Yes
Hypothesis test result	Valid	Valid	Valid	Valid	Valid	Valid

“\*\*\*” in Table 2 means p value is less than 0.001, “\*\*” means p value is less than 0.01, and “\*” means p value is less than 0.05. Based on the related contents in Table 1, the study on Table 2 shows

that among the three dimensional variables of the book publishing hypermedia narrative mode, there is a path coefficient with strong significance between the two dimensional variables of content production and organizational innovation and the two dimensions of business performance, market performance and financial performance. Relatively speaking, the significance of the dimensional variable of user perceived value is slightly weaker, but it still has a more significant path coefficient for market performance and financial performance.

#### **4. Conclusion**

With the fast-paced development of economy and society, people pay more and more attention to the application of electronic products, and gradually ignore the spiritual and spiritual comfort that traditional books bring to themselves. The per capita reading volume of books in China is far below the world average level, resulting in the development of the book publishing industry has also fallen into a trough. In order to meet the development of the times and the needs of people to read, the book publishing industry has carried out in-depth reforms, combined with 5G network technology, and improved from book creation and book publishing. This research conducted a detailed analysis of the hypermedia narrative mode and book publishing and other related content by constructing structural equation models and applying confirmatory factor analysis, thereby changing the marketing strategy of books. The research results show that in book publishing under the hypermedia narrative mode, content production, organizational innovation, and user perceived value are of great importance. The regression coefficients of the three are 0.441, 0.227, and 0.169, respectively. Except for the significance level of the user perceived value of 0.014, the values of the other two are both 0.000. The above data shows that the relevant variables of these three dimensions have a significant impact on corporate performance. This research is fortunate to have made some progress and results, but there are still some shortcomings. It is expected that in the future, experts in China can conduct more detailed investigations in the confirmatory factor analysis part.

#### **5. Acknowledgment**

Foundation project: 2020 Jiangsu University Philosophy and Social Science Research Project (2020SJA0893); The Humanities and Social Science Research Youth Foundation Project of the Ministry of Education in 2019 (19YJC88009); The key construction base for philosophy and social sciences in Jiangsu universities “South Jiangsu Industrial Transformation and Innovation Development Research Center” (2018ZDJD-B008)

#### **References**

- [1] Xia Kuang, Yang Yang. Research on the integrated development strategy of mass publishing under hypermedia narrative [J]. Publishing Research, 326 (01), pp.27-29+36, 2019.
- [2] Tuqiang Yi. Promoting publication quality with content innovation--On the quality evaluation and performance appraisal of books driven by content innovation [J]. View on Publishing, 317 (11), pp.20-23, 2018.
- [3] Mengmeng Lu. Interactive narrative strategies of data journalism: Based on the analysis of winners of the 2014-2018 Global Data Journalism Awards [J]. Publishing Journal, 27 (01), pp.94-100, 2019.
- [4] Zhiwu Xu. Digital storytelling in electronic picture books [J]. Publishing Journal, 26 (06), pp.96-100, 2018.
- [5] Yunli Du. Do a good job in inventory control and help the supply-side structural reform of the publishing industry [J]. Publishing Research, 000 (003), pp.47-48+77, 2017.
- [6] Miao Hu. Publishing house's operating strategies under the background of strengthening the evaluation and assessment of social benefits [J]. Publishing Journal, 27 (03), pp.70-73, 2019.

- [7] Jun Zhang. The formation of cost and profit accounting in book publishing-and analysis of calculation problems in 2016 intermediate practice subjects [J]. Science-Technology and Publication, 04, pp.14-18, 2017.
- [8] Wengao Lou, Ruijuan Gan, Tan Li. The library outcomes (performances) evaluation using the projection pursuit clustering model [J]. Library and Information Service, 000 (009), pp.65-73, 2017.
- [9] Yun Sang. Research on the development of the integration of artificial intelligence and book publishing [J]. Science-Technology and Publication, 09, pp.96-99, 2017.
- [10] Xiangyang Wang. How traditional book publishing editors deal with the challenges of the big data era [J]. Science & Technology for China's Mass Media, 000 (002), pp.75-76, 2017.