



The Impact of AIGC Adoption on Customer Acquisition for SMEs in Chengdu

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Abstract. This study indicates the impact of AI-generated content (AIGC) on customer acquisition enhancement for small and medium-sized enterprises (SMEs) in Chengdu, aiming to reveal how AIGC adoption affects companies' market performance. We break down AIGC adoption into five dimensions: AI creative production, AI short video production, AI copywriting, AI voice generation, and AI image generation. By empirically analyzing the questionnaire and in-depth interview data from 150 Chengdu SMEs, we find that AIGC adoption has a positive effect in significantly improving the customer acquisition ability of enterprises. The regression analysis results show that each AIGC segmentation application has a different degree of impact on the customer acquisition of enterprises, with the impact of AI short video production and AI creative production being particularly significant. This study provides empirical support for how enterprises can effectively utilize AIGC technology and offers specific suggestions for enhancing the market competitiveness of SMEs.

Keywords: AIGC, SMEs, Customer Acquisition

1 Introduction

With the development of artificial intelligence technology, the application of AI-generated content (AIGC) in the business field has gradually become popular, especially among small and medium-sized enterprises (SMEs), which are highly competitive in the market, and AIGC has become an important means of enhancing competitiveness. AIGC covers a wide range of content production modes, and it provides a more efficient and cost-effective solution for enterprises to customer acquisition. However, the effectiveness practical application and its specific impact on customer acquisition enhancement have not been fully studied.

This study aims to explore the impact of AIGC adoption on customer acquisition of SMEs in Chengdu through empirical analysis and the data from questionnaires of 150 SMEs in Chengdu to reveal the specific effects of these technology applications on the customer acquisition enhancement of enterprises. This study not only enriches the existing theoretical research on AIGC adoption, but also provides empirical evidence and

practical suggestions on how SMEs in Chengdu can effectively utilize AIGC technologies during fierce competition.

2 Literature Review

In recent years, the application of Artificial Intelligence Generated Content (AIGC) technology in enterprise marketing has received a lot of attention. AIGC technology, especially AI-driven creative production, short video production, and copywriting, has demonstrated significant advantages in improving the efficiency of enterprise marketing, lowering the cost, and enhancing the attractiveness of customers[1] (Huang & Rust, 2021; Lee et al., 2022).

The importance of user-generated content (UGC) as a factor in customer acquisition and retention has also been well-documented. In their study, You and Joshi (2020) explore the relative impact of UGC and traditional media on customer acquisition, concluding that while UGC is more effective in attracting new customers, traditional media is more influential in retaining them[4]. This synergy between UGC and traditional media is particularly beneficial for enhancing CRM efforts (You & Joshi, 2020).

Digital transformation is another critical area impacting SMEs' customer acquisition strategies. Chatterjee et al. (2021) highlight that the adoption of AI-CRM capabilities, when combined with strategic planning, significantly boosts digital entrepreneurial capacity in SMEs, thereby supporting customer-focused growth[5] (Chatterjee et al., 2021).

Additionally, Ahani et al. (2017) underscore the relevance of social CRM adoption in SMEs, finding that compatibility, information capture[6], and competitive pressure are critical drivers. This social CRM adoption empowers SMEs to engage customers more effectively on social media platforms, thus improving customer acquisition and engagement through targeted strategies (Ahani et al., 2017).

Despite the promising applications of AIGC technology, in practice, SMEs still face challenges in terms of technology understanding and talent pool[2], which limits the full utilization of AIGC technology (Andreas & Frank et al., 2022). Therefore, future research needs to further explore how to promote the popularity and application of AIGC technology among SMEs through training and policy support to maximize its customer acquisition potential[3] (Tyasari, 2021)

3 Research Design

This study adopts a quantitative research method to collect data related to the adoption of AIGC technology by SMEs in Chengdu City through a questionnaire survey. The study aims to explore the impact of AIGC adoption degree on customer acquisition of SMEs. To this end, we constructed a research model with AIGC adoption degree as the independent variable and enterprise customer acquisition as the dependent variable.

3.1 Variable Definition and Measurement

Data collection was in the form of a questionnaire. The questionnaire design is based on existing literature and optimized for the actual situation of SMEs in Chengdu. The questionnaire included various indicators of the firms' AIGC adoption, as well as the firms' customer acquisition and other control variables. The questionnaire was distributed through an online platform. Data collection was conducted between July and August 2024, and 150 valid questionnaires were received with a 75% return rate.

The independent variable in this study is AIGC adoption, which covers the following five segmented dimensions: AI creative production, AI short video production, AI copywriting, AI voice generation, and AI image generation.

The dependent variable is the customer acquisition of SMEs, which refers to the number of new customers acquired by the firm in each time. This variable is measured by the following two indicators. Customer growth rate. One is the percentage increase in the number of new customers acquired by the firm relative to the previous quarter or year. Another one is customer Acquisition Cost. The average cost per new customer that the firm pays to acquire a new customer. These indicators are also collected through quantitative questions in the questionnaire, where companies fill in the actual numbers or choose the option that best fits the description.

3.2 Methods of Statistical Analysis

The following 2 main statistical analyses were used to analyze the data in this study. In fact, correlation analysis is used to explore the linear relationship between the dimensions of AIGC adoption and SME customer acquisition. We will calculate the Pearson correlation coefficient to determine the degree of correlation between each independent variable and the dependent variable. This analysis will reveal which AIGC techniques play a more significant role in improving business customer acquisition. In addition, based on the correlation analysis, we further used multiple regression analysis to assess the independent effects of the respective variables (dimensions of AIGC adoption) on the dependent variable (SME customer acquisition). The regression model allows us to control for the interference of other factors and accurately measure the extent to which each of the independent variables influences the amount of business customer acquisition. The model is set up as:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \epsilon$$

In this model, Y represents the customer acquisition volume of SMEs, X_1 through X_5 denote the five dimensions of AIGC adoption, β_0 is the constant term, β_1 through β_5 are the regression coefficients, and ϵ is the random error term.

3.3 Tools and Software

Data analysis is mainly carried out using SPSS statistical software. SPSS provides powerful statistical analysis functions, which can effectively support a variety of statistical

methods such as descriptive statistics, correlation analysis and multiple regression analysis. In addition, data preprocessing and visualization are also done in SPSS to ensure the accuracy and efficiency of the data processing process.

4 Results

4.1 Correlation Analysis

Correlation analysis was used to explore the relationship between different applications of AIGC technology and customer acquisition by SMEs. The results calculated using Pearson's correlation coefficient are as follows. AI creative production: the correlation coefficient with customer acquisition is 0.62, indicating a strong positive correlation between AI creative production and customer acquisition. AI short video production: the correlation coefficient with the amount of customer acquisition is 0.88, indicating a strong positive correlation between AI short video production and the amount of customer acquisition. AI copywriting: the correlation coefficient with customer acquisition volume is 0.58, showing a moderately strong positive correlation. AI voice generation: the correlation coefficient with customer acquisition volume is 0.35, showing some positive correlation but relatively weak. AI image generation: the correlation coefficient with the amount of customer acquisition is 0.48, indicating a moderate positive correlation.

4.2 Regression Analysis

To further investigate the specific impact of AIGC technology applications on customer acquisition, a multiple regression analysis was conducted. The regression model is as follows:

$$\text{Customer Acquisition} = \beta_0 + \beta_1 \text{AI Creative Production} + \beta_2 \text{AI Short Video Production} + \beta_3 \text{AI Copywriting} + \beta_4 \text{AI Voice Generation} + \beta_5 \text{AI Image Generation} + \epsilon$$

The results of the regression analysis are as follows: first of all, AI Creative Production, with a regression coefficient of $\beta_1 = 0.53$ and a p-value < 0.01 , indicates a significant positive effect on customer acquisition. Secondly, AI Short Video Production, with a regression coefficient of $\beta_2 = 0.62$ and a p-value < 0.05 , shows a significant positive impact on customer acquisition. Thirdly, the regression of AI Copywriting, with a coefficient of $\beta_3 = 0.32$ and a p-value < 0.01 , suggests a moderately significant positive effect on customer acquisition. Next, AI Voice Generation, with a regression coefficient of $\beta_4 = 0.12$ and a p-value $= 0.08$, indicates a smaller but nearly significant effect on customer acquisition. In addition, AI Image Generation, with a regression coefficient of $\beta_5 = 0.28$ and a p-value < 0.05 , demonstrates a moderately positive influence on customer acquisition.

5 Conclusion

Through questionnaire survey and data analysis of 150 SMEs in Chengdu, this study reveals the significant impact of AIGC technology on customer acquisition. The main findings include AI idea production, AI short video production, AI copywriting and AI image generation all have a significant positive impact on customer acquisition, indicating that the application of these technologies can effectively improve the customer acquisition ability of enterprises. In addition, AI voice generation has a smaller impact, but still shows some positive trend. This may be related to the fact that the application of speech generation technology in customer service is still in the developmental stage. These results suggest that there are differences in the impact of different types of AIGC technologies on customer acquisition, and enterprises need to optimize the selection and application of these technologies according to their own needs.

The results of this study have important implications for SMEs in applying AIGC technologies. Firstly, enterprises should prioritize investment in AIGC technologies that have a significant impact on customer acquisition, such as AI creative production and AI Short Video Production, based on their business needs and goals. Secondly, when applying AIGC technologies, enterprises should continuously optimize their technology application strategies to improve customer acquisition efficiency. For example, AI short video production and AI image generation can enhance the advertising effect through more attractive content. Thirdly, due to the rapid development of AIGC technology, enterprises need to continuously pay attention to the application trends of new technologies and adjust their marketing strategies in time to maintain competitive advantages.

Finding

This study, based on a questionnaire survey and data analysis of 150 SMEs in Chengdu, reveals the significant impact of AIGC technology on customer acquisition. The main findings are:

AI creative production, AI short video production, AI copywriting, and AI image generation all have a significant positive impact on customer acquisition, suggesting that these technologies can effectively improve customer acquisition ability.

AI voice generation has a smaller impact but still shows a positive trend, likely related to the developmental stage of speech generation technology in customer service.

These results suggest that the impact of different AIGC technologies on customer acquisition varies, and enterprises need to optimize the selection and application of these technologies according to their specific needs.

The study's findings have important implications for SMEs in applying AIGC technologies. First, enterprises should prioritize investment in AIGC technologies that have a significant impact on customer acquisition, such as AI creative production and AI copywriting, based on their business needs and goals. Second, when applying AIGC technologies, enterprises should continuously optimize their strategies to improve customer acquisition efficiency. For example, AI short video production and AI image

generation can enhance advertising effects through more attractive content. Lastly, due to the rapid development of AIGC technology, enterprises must continuously monitor application trends and adjust their marketing strategies to maintain competitive advantages.

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