

E-Commerce, Generative AI, and Changing Nature of Cultural & Creative Industries: Impact on Human Capital

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Abstract. The emergence of new generation artificial intelligent technology, called Generative AI (GenAI), combined with the Internet-based business model of e-commerce, have greatly impacted on the culture and creative industry. Besides broadening markets and lowering transaction cost, digital platforms and artificial intelligence are changing how work is allocated, what skills workers have and how they invest in themselves. In this article we analyze the supply- and demand-side effects of the platform economy, concentrating on the impact of technological change on productivity, market concentration, and income inequality. Although digital technology makes information more efficient to produce and easier to access, it brings in labor polarization and platform dependency, this research points out that technology advancement should be accompanied by sustainable Human Capital Development and Cultural Integrity.

Keywords: E-commerce, Digital Platforms, Generative AI, Cultural and Creative Industries, Human Capital

1. Introduction

1.1. Cultural and creative products

Cultural or creative goods are typically designed upon a history artifact or cultural heritage, integrating the cultural meaning and commercial values. They can be considered as knowledge-creativity intensive output these goods are important to the formation of group identity and shared memory.

The cultural and creative sectors constitute a core component of the modern creative economy. Characterized by reliance on human ingenuity and intellectual capital, they contribute not only to economic growth but also to employment creation, particularly among young people. Their development reflects both economic modernization and cultural transformation.

1.2. Development of e-commerce and its connection to cultural and creative products

With the proliferation of social media platform, it cannot be denied that there are some close relations among e-commerce and others social media platform. The origin of world online influencing could be traced back from digital blog or platform at the beginning of the 2000's

[1].Recent study reveals that Instagram carries the biggest part of Influencers community [2]. What is noticeable is that one key aspect of influencing is based on their collaborations with sponsors. With the release of Vamp in 2015, a company matching influencers to sponsors, became an influential player [3].

Thirdly, with the confluence of technology, changes in media use and changing social norms, platforms like Instagram and TikTok brought about the birth of micro-celebrity. Micro-celebrities are those who have accumulated many fans and exerted great social influence, which is regarded as a "platform celebrity" phenomenon [4]. By endorsing, Internet celebrities convey persuasive product information to consumers and thus assist e-commerce sellers in gaining the attention and credibility of consumers [5]. The Chinese Internet celebrity economy originated in 2016,thanks to the development of e-commerce in this 21st century [6]. The Chinese Internet celebrity economy originated in 2016,thanks to the development of e-commerce in this 21st century. Online shopping platform is exploding with the rise of live broadcast marketing technique become more common nowadays. The closure of physical stores and shopping mall due to pandemic opens the door to develop internet celebrity economy. Since January 2021, there is also seen a significant increase in real-time broadcasts of goods sales not only on big platforms but also on short videos (such as Douyin) or social media (such as Weibo). Internet celebrity economy has affected all kinds of activities in many countries around the world and becomes one of the key factors that drive economic interactions.

With continued technological advancement and the proliferation of Internet-based retail sites, e-commerce's potential impact on various markets, including the market for cultural and creative goods, have become ever more significant. Given that the cultural and creative industry is becoming ever more important to the economy and society through its economic value and cultural contribution, it is necessary to study how this new-born Internet celebrity culture in conjunction with the rapidly developing e-commerce websites would influence the selling of cultural and creative products. Therefore, this article would like to discuss about how e-commerce affects the sale of cultural and creatives product by looking at its opportunities and challenges from both supplier's side and consumer's side.

By analyzing these multiple interactions, we aim in this paper to provide an overall picture of the evolving interaction between e-commerce and C&CS, so that the findings can illuminate both opportunities and challenges for producers: as well as consumer impacts and the protection of cultural heritage in the information age.

Beyond e-commerce growth, a second trend—the rise of generative artificial intelligence (GenAI)—has started to affect both creative output and online marketing activities. Generative AI is being deployed for content production, and algorithms for recommendations. Such technical developments have implications not only on the level of sales, but also influence the organization of labor and skills needed in culture and creativity sectors.

The livestreaming culture of the Internet celebrity economy does bring certain benefits to the cultural and creative industry from the supply side, especially through a relatively cheap but effective online network for brands' promotion, which optimizes cost structure and spreads cultural products.

With demand from fans and consumers, the profitability of brands largely depends on their frequency of exposure to consumers, making investment in marketing and promotion unprecedentedly essential. Hence, a low-cost but effective marketing strategy is a key for producers to earn market shares. Less famous brands are looking for new opportunities for survival, while top brands are seeking further expansion possibilities to consolidate and develop their market status.

Compared to smaller businesses, top brands usually have the advantages of larger consumer base, high sales volume, and consumer loyalty.

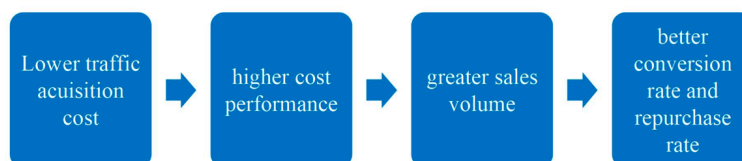


Figure 1. The flow chart of the process that how business allocate the resource

As depicted on the chart, Reducing TAC leads to improvement of cost performance which allows the business to utilize resource better and thus drive higher sales volumes with more customers being attracted for less costs. With increase of sales volume, the conversion rate is improved by better targeting and customer engagement as well: over time happy customers will buy again... resulting in increased buybacks, with continued company expansion.

Under this condition, the TAC is relatively controllable, can bring growing brand exposure and higher return on investment. [□] Since the traffic of less popular brands is lower on the internet, their demand for lower TAC, or Internet celebrity economy, is higher.

Whether it is a leading brand or a small or medium-sized brand, the need for relatively low TAC attracts all brands to join the e-commerce, meaning to enter the Internet celebrity economy. As more companies join, the vast customer base of the platform itself will start recognizing certain brands and then notice the cultural and creative products behind the brand effect. No matter these artifacts are purchased or not, the fact of people recognizing the start to appreciate these artifacts undoubtedly improves the spread of culture and achieves the core purpose of cultural and creative products.

Take China as an example, with the arrival of e-commerce culture, China's live broadcast usage rate increased from 47.1% in 2016 to 62.0% in 2020 [8]. In addition, daily active users of TikTok and Kwai reached 270 million and 170 million respectively in October 2019, which is no less than Taobao's 290 million and PDD's 160 million. The emerging Internet celebrity economy in the Chinese market indicates a significant increase in the number of potential customers for live broadcasting cultural and creative products, which will bring positive effects on the sales and promotion of cultural and creative products.

Even though most online platforms are still in the early stages of commercialization, platforms like TikTok and Kwai, for instance, have only gradually begun commercialization since 2018 with less mature distribution rules for e-business traffic within the platform. The relatively low TAC on these platforms in the early stage of development provides all brands and businesses, especially less popular cultural product businesses, the chance to promote themselves and take the market. In 116 Shopping Carnival of Kwai in 2019, for example, the platform gives different levels of traffic incentives to many sellers, aiming to reduce the TAC of live streamers as much as possible. In turn, these producers also gained a lot of exposure and publicity without investing high advertisement fees, which is a win-win outcome.

Live streaming is a classical way of presentation in the Internet celebrity economy that acts as an entertaining tool with high-quality content creations and fast-paced transaction afterwards. The impact of live streaming on sales is also akin to an explosive phenomenon. On Taobao, the largest online shopping platform in China, for example, the surge in sales caused by live-streaming directly translates to an elevated brand ranking. [□]This approach not only curtails marketing expenses on the

platform but also garners invaluable new users and enhances exposure rate for producers. Therefore, even if the Return on Investment (ROI) for an individual live broadcast falls below 1, the overall ROI for the platform can still surpass the threshold for the brand. Moreover, live broadcasting establishes a direct connection between consumers and producers such as original factories, significantly reducing costs associated with channel circulation and information dissemination. This compression and getting rid of middlemen and agents lead to profit maximization within the reach of the audience, causing profound changes in the relationships between enterprises and consumers in e-commerce. Specifically, it has changed the production and operation procedures and organization structure, thus a new chain of value exchanges and greater space for a win-win solution appeared. By enjoying the lowered marketing and advertising costs when live broadcasting is introduced for marketing, cultural and creative enterprises can then choose suitable strategies to gain cost advantages. Also, the cultural and creative sectors typically feature a significant presence of micro-enterprises and small- to medium-sized enterprises (SMEs), with 99.9% of CCS businesses in OECD nations falling within this classification (OECD, 2022). Therefore, finding a suitable marketing strategy for SMEs is important for the sales and promotion of cultural and creative products. Compared to large-scale traditional e-commerce, small and medium-sized e-commerce purchases are characterized by smaller individual transactions and sourcing from various suppliers, including self-operated stores. This grants them significant autonomy in selecting sources of goods and supply chains. During their transformation, they can capitalize on this advantage by implementing a flexible supply chain that offers quick responses and accommodates both small and large quantities. This approach enables producers to fulfill customized customer demands effectively. This advantage is particularly useful for the sale of cultural and creative products since cultural and creative products often exhibit a wide range of diversity and uniqueness, requiring a flexible and diverse supply chain to effectively meet consumer demand. By sourcing from various suppliers, including self-operated stores, small and medium-sized e-commerce businesses can access a broader array of cultural and creative products, catering to niche markets and offering a more diverse product selection. Additionally, the autonomy in selecting sources of goods allows these businesses to curate a product range that resonates with their target audience, enhancing the overall shopping experience and fostering customer loyalty. Furthermore, the ability to offer quick responses and accommodate both small and large quantities enables them to adapt swiftly to changing consumer preferences and market trends, staying ahead of the competition in the dynamic cultural and creative industries.

In summary, the development of the Internet celebrity economy optimizes the consumption structure so that more people can know about culture products and achieve its own value. Furthermore, with advances in artificial intelligence (AI)-driven design or computer-generated text, writers can cut down on their daily creative work cost, which increases efficiency yet decreases the need for less skilled creative activities suggesting that there might be some reorganization of the industry's work force.

1.3. Negative effects from producers' perspective

For the producers themselves, the constraints under which they operate in this Internet celebrity economy and the rising transport costs, may impede broad distribution of cultural and creative content.

The existing model for online shopping websites still has some shortcomings, which hinders the development of Internet celebrity economy; instead of focusing on important issues such as optimizing supply chain and product service and quality, the focus is often placed elsewhere, which

will result in most SME e-commerce businesses entering a vicious circle of fraud. Such an abnormal operation mentality can not only affect its own development, but also hinder the normal development of the market economy.

In the early stage of the development of e-commerce, Taobao and Tmall attracted a lot of SMEs and millions of sellers and platforms enjoyed the rapid rise of the Internet celebrity economy. But the rise of big brand names, as well as KOLs on e-commerce platforms led to higher cost for promotion by merchants, so that smaller firms must dedicate much of their efforts to comply with the platforms' rules, optimize keywords, etc..

That is to say that improving defects in internet star economy and facing the challenge from increasing transport cost are important issues for promoting culture and creativity commodities, we must focus on optimizing its production chains, and by improving products and services, promote a robust marketplace in which appropriate competitive dynamics prevail that these potentially adverse effects of this operating mind-set may be minimized so that there will still be room to grow and develop .

The recent rise in fuel price and ongoing shipping container shortage. Sustained increases in transport cost will reduce consumer's willingness to access culture and creative goods and services; however, it will impact negatively on e-commerce generally. More recently studies have shown that increasing delivery and transport costs are becoming an issue for online retailers across the UK (see). Findings show that almost half (48%) of UK-headquartered e-commerce brands said rising shipping costs was the greatest risk to their business growth outlook, with figures revealing that the price for sending a medium-sized parcel (around the size of a shoebox) abroad is up more than one-third: from £15.73 to £20.56 each parcel, and this large increase in delivery prices represents a substantial barrier for internet merchants, particularly small firms, have to maneuver in order to survive and grow.

As platform-based e-commerce continues to mature, it naturally leads to a decrease in overall traffic, further compounded by the emergence of alternative e-commerce models competing for consumer attention. What particularly noteworthy is the rise of Online-to-Offline (O2O) e-commerce in recent years, which aims to enhance customer convenience and elevate the shopping experience. According to a study of China's O2O food delivery industry, for example, new strategies and regulations from the O2O platforms, food providers, and national and local governments in China brings both huge rewards, exponential growths, and risks.

In the midst of all these developments are powerful rivals like Taobao from Alibaba, or JD.com and its effective logistics network, and the strong online-offline combination of Suning, small and medium sellers who rely too much on the platform's manufacturing are faced with rising customer acquisition costs. It is imperative that they look for other ways to sustain their business.

With rising transport cost, the total price of commodities rises accordingly, leading to reduced consumer consumption. The knock-on market effect greatly restricts the turnover of cultural and creative products, highlighting that shipping costs, pricing decisions, and consumers' buying patterns are now intertwined in a more complicated way than before because of the rise of e-commerce.

2. Demand-side impacts of e-commerce on cultural and creative products

2.1. Positive effects from consumers' perspective

Influencers serve as a nexus between culture products and consumers that can bridge the abstract space of culture production to concrete and commercialize products.

As celebrities are special and critical opinion leaders in influencing others to take their advice, internet celebrities as opinion leaders can deliver product information, provide recommendations, personal comments and supplement professional knowledge, which may help companies boost sales. Importantly, individuals are now likely to turn to online opinion leaders and adopt their attitudes or ideas, particularly in relation to purchasing decisions that are strongly affected by online information.

Moreover, nowadays our civilization is very focused on values like cultural innovations. Celebrities' speech evolves depending on changes in the value system. In such a context, there is a large-scale promotion and development on culture product, for instance, in selecting the cultural and creative products from the Palace Museum, buyers place high emphasis on some aspects like "cultural connotation" or "unique creation".

In the context of research on social endorsements, one widely accepted explanation for the existence of the endorsement effect as well as the Internet celebrity economy is that celebrities give an impression of authenticity to the sponsored contents. This, in return attracts consumer's attention and builds up their confidence, eventually making consumers have stronger interests and tendencies to purchase more goods from these recommended stores.

Internet celebrity mode contribute distinctive creativity, delivering a unique and engaging interactive experience for their audience where consumers can see the digital influencers presenting and using those products via online broadcasting. Results showed that innovation and experience values have a significant positive effect on purchase intentions, while quality, social, price, and educational values had no significant influence on purchase intentions. Also, apart from market interaction, functional integration is crucial competences as well. In the network economy, strategic assets involve network- wide market orientation and cross-organizational integration. Thus, a more competitive network increases profit potential for participating firms, and successful product innovation requires collective market orientation.

Frequently introduced new cultural and creative products also positively affect consumers' demand. Design-driven innovation fosters radical innovation, providing a significant long-term competitive edge. This article revealed that although people do not buy products for their meanings, they use them for deep emotional, psychological, and socio-cultural reasons. Product style is just one way a product communicates messages to the user. It is precisely because the Internet celebrity economy tends to be oriented towards social values, and the impact of people's consumption psychology leads to cultural and creative products being given more meaning, thus promoting the impact of design-driven economy. After the popularity of the Forbidden City IP, other museums followed its model to design cultural and creative products, forcing the Forbidden City to design popular products in a short period of time to maintain its popularity.

Algorithmic recommendations are increasingly used by digital platforms to distribute consumers' attention. Accordingly, market visibility is not only dependent on the product itself, but now also depends on data-driven platform mechanisms which can increase efficiency, yet reinforce winner-takes-all-dynamics, which influences the income allocation of producers. Internet celebrities are between cultural products and consumers who can represent real products and provide special creativity. Therefore, it brings about an exclusive interactive experience, thus promoting the wide distribution of cultural goods and boosting its consumption.

2.2. Negative impacts from consumers' perspective

The Internet celebrity economy has certain negative impacts on the dissemination of cultural and creative products because of its unprofessional and commercial nature.

2.2.1. Lack of professionalism

Net celebrity economic commodity sales lack professionalism, which is reflected by the obvious absence of two aspects: firstly, the lack of understanding on the history of cultural relics and secondly, the lack of good Internet marketing research strategy formulation. The two deficiencies have led to both the distortion of the information provided for cultural relics as well as the failure of the net celebrity's positioning strategy on the network, leading to poor utilization and low penetration into the marketplace.

As to the correctness of design history facts about product designs, Misrepresentation of Historical Context: Cultural relics being presented and/or sold as if they were produced under a different set of circumstances than is actually true, leading to misinterpretation and misinformation, including an incorrect understanding of the relics' cultural and historic value not telling stories but passing on myths or stereotypes instead, such as the dolls created by China's Hebei museum that refers to other cultural relics of different time and style and does not have a visual link with its own cultural relics.

Furthermore, fictitious accounts add to the problem of fabricating stories about a cultural relic which have no basis in history or are derived from myths and legends instead of facts—for example, the Palace Museum released a new nightgown, it is extremely exaggerated description, unreal promotion. In addition, by neglecting the cultural value of some objects, designers cannot see them as an essential part for culture construction and inheritance, leading to shallow and/or incorrect treatment of those artifacts as part of creative works. A lack of awareness about a culture's heritage can result in the distortion, or even exploitation, of culturally significant artifacts, undermining its own values and meanings for today's society. Hence, it is suggested that producers of culture and creative products should employ more history experts and collaborate with authoritative institutes like museums to guarantee the authenticity of historical facts on product designs, respecting culture, and history.

In terms of the internet marketing research strategies, the overheated internet celebrity market forces everyone to want to join, but the design and production of cultural products need to be strictly controlled. First impressions of a product are important, business owners and digital marketers should focus on bringing their internet marketing campaigns to professional levels, otherwise they will not be taken seriously by their targeted customers. The existing research presented strong evidence on the impact of internet marketing research on achieving competitive advantage. This means that telecommunication operator could benefit more from internet marketing research if they started using it more professionally. The main result of the study reveals that internet marketing research has a positive direct impact on achieving competitive advantage by providing the necessary data, information, and knowledge essential for identifying opportunities and taking decisions. Starbucks, for example, achieved its paramount position through a strategic commitment to market research. This approach encompasses a comprehensive strategy involving the tracking of cultural trends, vigilant monitoring of social media, soliciting customer feedback, and conducting in-store product testing. Over the past 14 years, Starbucks has effectively utilized market research by actively engaging with consumers through its My Starbucks Idea platform. This online space enables customers, potential patrons, and employees to visit the website and submit creative ideas spanning from novel offerings to subtle enhancements in existing products. Starbucks meticulously evaluates and incorporates all customer feedback into its overarching business and marketing strategy. This shows the importance of internet marketing, which is also applicable for cultural and creative products.

2.2.2. Commercial nature

Economy's entry into the cultural sphere may be a threat to the cultural heritage. Fairclough interprets changes in contemporary capitalism as a re-structuring of the relations between economic, political, and social domains, where new areas become subject to the economic logic of the market. The new urge to invite people to the museums in the article is not primarily directed towards those who want to preserve the established order - in this case, the old buildings - but rather towards the interests of average people. Same to cultural products, under the Internet celebrity economy, all commodities serve for benefit, and the connotation of culture itself is weakened. The instrumental logic of economy is penetrating the cultural field. Provisions for integrating the museums into urban development processes and enabling them to serve as engines of growth and synergies of various kinds. Culture is about to lose its value as culture per se. At least, it must play roles other than attending to its own self-preservation. It is entangled in major cultural strategies and wrapped up in neo-liberal market ideologies and circulated as a hybrid discourse. When culture loses its value as culture itself, cultural and creative products only appear as commodities, and the cultural value transmitted by them cannot achieve its purpose.

Take the Oslo Museum as an example, the supportive arguments are analyzed against the backdrop of the critical voices. The critics want to preserve the old buildings because they are embedded in the nation's collective memory and have value as history. The supporters of the plans argue that the new buildings are bricks in a bigger city renewal project and shall generate synergetic effects beyond just functioning as cultural institutions.

Same for cultural and creative products, there have been two sides of the voice. Critics believe that culture is transformed into a commodity is the blasphemy of culture, supporters believe that it is to provide a platform for the new development of culture. However, the economic intervention will force the nature of cultural and creative products will be no longer pure. Once culture is labeled as a commodity, its own purpose of spreading culture is greatly weakened, and the meaning of marketing is enhanced.

3. Conclusion

The development of e-commerce (e.g., the booming of internet celebrity economy) has brought about great influences on the selling and spreading of cultural and creative products. From the suppliers' side, the cost-effective yet efficient marketing methods brought by livestreaming and KOLs marketing, which enables big brands or small manufacturers to raise their profiles and reach more consumers. With the recommendation from online celebrities, the cultural and creative products could gain much attention. As a result, the brand awareness is improved, attention, and value to cultural goods. However, limitations in today's e-commerce infrastructure like dominance by existing players and increasing shipping prices, create obstacles for SMEs in CC industries.

From the perspective of the demand side, digital influencers contributed to the transformation from the intangible world of culture to the concrete and commercialize products by embodying cultural products and providing unique creativity, internet celebrities created an interactive environment, which increased consumers' interest in purchasing products. However, has led to concerns that historians are not sufficiently professional when it comes to properly contextualizing history and culture, suggesting, however, that a great deal of care must be taken, and that there is a threat from market forces which could reduce culture to mere commodity status.

Thus, we need to balance the use of e-commerce opportunity on one hand while protecting the authenticity and value of cultural and creative products; producers can work with authoritative

agencies or experts to guarantee the authenticity and accuracy of culture inheritance, while also tapping into the power of social media, bloggers etc., in an intelligent and professional way. Customers also ought to be prudent and find ways to promote works which do truly represent and help to sustain the diversity of cultures.

Navigating this new reality in an informed way means that the culture and creative industries should be able to benefit from e-commerce without falling into some of its traps – thus allowing for both the further proliferation of cultural content and its continued circulation that they maintain the value they have for us, that is, for our common good.

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