Research Article

Research on the Impact of “Internet+” on China’s Manufacturing Industry Agglomeration – An Empirical Research Based on the Mediating Effect Model of Provincial Panel Data

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With the continuous deepening of the "Internet +" action plan, the deep integration of the Internet and the manufacturing industry has an increasing impact on the degree of agglomeration of the manufacturing industry. This paper mainly studies the impact of Internet development on the degree of manufacturing agglomeration and empirically examines the above effects using the interprovincial panel data from 2006 to 2017, and further uses the mediation effect model to study the mechanism through which Internet development affects the manufacturing agglomeration effect. The research results show that the development of the Internet has improved the degree of agglomeration of the manufacturing industry, and the development of the Internet has promoted the degree of manufacturing agglomeration by promoting the level of manufacturing infrastructure investment and knowledge spillovers. Therefore, it is necessary to accelerate the deep integration of the Internet and the manufacturing industry, use the Internet to transform the manufacturing industry, and create new business forms and new models.

1. Introduction

At present, the new generation of information technology represented by the Internet is beginning to integrate and develop deeply with the manufacturing industry. “Made in China 2025” is an important action plan for China to move from a "big" manufacturing country to a "powerful" manufacturing country, which specifically proposes to deepen the application of the Internet in the manufacturing field, develop new manufacturing models, and promote the formation of new industrial organization methods and establishment of an open industrial ecosystem. In China's “Guiding Opinions of the State Council on Actively Promoting the “Internet +” Action,” it further proposes to apply the Internet for "co-manufacturing.” China is accelerating the construction of an intelligent manufacturing ecological environment and accelerating the close collaboration between key manufacturing enterprises and all links of the industrial chain through the Internet with the purpose of breaking the boundaries of enterprises, building a public service platform for networked collaborative manufacturing, and promoting the geographical agglomeration space of various production factors. Therefore, an in-depth study of the mechanism through which the “Internet +” development strategy affects the agglomeration effect of China’s manufacturing industry will be the focus of this paper.

As a major industrial country in the world, the development of manufacturing industry has a significant impact on China and the world. The unbalanced spatial distribution of manufacturing industry is an important factor restricting the high-quality development of China’s regional economy. The Chinese government has issued policies to promote the development of the manufacturing industry in many aspects. One of the most important goals is to promote the agglomeration and development of the manufacturing industry so as to achieve the purpose of rapid economic development. With the rapid application of the Internet in the manufacturing field, the Internet has changed the
production model and industrial organization of China’s manufacturing industry to a certain extent through creative destruction. At the enterprise level, the Internet has improved the efficiency of enterprise production. From an industrial perspective, the Internet has changed the way manufacturing production is organized. At the regional level, the Internet promotes the balance and adequacy of regional innovation and regional development.

Whether theoretically or practically, it is very important to study the influence mechanism of the Internet on the manufacturing agglomeration effect. The main contribution of this paper is to deeply explore the impact of the “Internet +” development strategy on the spatial distribution of manufacturing industries, and to use the mediation effect model to conduct in-depth research on the mechanism through which the “Internet +” development strategy affects manufacturing agglomeration.

2. Literature Review

At present, the research on China’s manufacturing agglomeration effect has been relatively abundant, and scholars have carried out relatively sufficient research on the manufacturing agglomeration effect from various aspects. Ju and Chen [1] believe that geospatial agglomeration is the most important factor affecting manufacturing agglomeration, and the spatial distribution of manufacturing activities is a trade-off between centripetal force and centrifugal force. Liang [2, 3] studies the theory of new economic geography and believes that the spatial agglomeration of industries is conducive to reducing transportation costs, forming labor pools, sharing infrastructure, promoting knowledge spillovers, and forming input-output correlations between enterprises. One view [4] is that when the scale of industrial agglomeration gradually expands, problems such as market capacity restrictions, rising production factor prices, and deterioration of the ecological environment becomes the main problems that microsubjects in the agglomeration area have to face.

Preliminary results have been achieved in the research on the agglomeration effect of “Internet +” on manufacturing. Ping [5] finds that with the gradual deepening of the “Internet +” action, the innovation and R&D of manufacturing enterprises have been transformed into open innovation, the transaction process has been accelerated, and transaction costs and links have been reduced, which will greatly enhance industry agglomeration effects in China. On the other hand, Wang [6] reveals that the Internet platform conducts the agglomeration and allocation of production factors across space, so that nonmaterial production factors are no longer restricted by geographical space, which accelerates the mobility of production factors and leads to the geographical expansion of manufacturing industries. Li et al. [7] emphasize the importance of Internet platform enterprises. By adopting online agglomeration, the interaction between users and merchants has been enhanced, providing a feasible mechanism for large-scale customized production. Qi et al. [8] believe that under the Internet-based digital economy, the production mode has changed from traditional mass production to personalized customization, and flexible and intelligent production enables enterprises to flexibly produce according to user needs. Liu et al. [9] argue that the transformation of manufacturing production methods is also the main driver of the industry’s “aggregation-diffusion” changes. Information technology breaks the original value chain division of labor, promotes cross-border integration, and becomes a new driver of industrial agglomeration. Tong [10] holds that manufacturing enterprises reorganize their industrial chains through the innovation and productivity brought about by the rapid development of the Internet, which promotes the separation of processing and manufacturing links from design links and collaborates with inter-enterprise products and services to implement productive services and services. These studies theoretically analyze the influence mechanism of the Internet on the manufacturing agglomeration effect. However, there are still few empirical studies on the agglomeration effect of “Internet +” on the manufacturing industry, and there is a lack of in-depth discussion and research on the impact mechanism of “Internet +” on the agglomeration effect of the manufacturing industry.

3. Theory and Research Hypothesis

The Internet has the characteristics of infrastructure, which will directly attract and agglomerate manufacturing enterprises [11]. Internet-based 5G network technology, artificial intelligence, industrial Internet, and other general technologies are conducive to information transfer, knowledge spillover, R&D collaboration of manufacturing enterprises, and promote manufacturing agglomeration [12]. The new generation of information technology is profoundly changing the production mode and production form of the manufacturing industry. China is promoting the digital, intelligent, and networked transformation of the manufacturing industry, and manufacturing enterprises use the new generation of information technology to transform the entire production and sales process. However, due to the large differences in the level of investment in information infrastructure in various regions, regions with relatively high levels of economic development, especially regions with the rapid development of the new generation of information technology industries, have high levels of investment and construction in information infrastructure. Manufacturing enterprises have a high degree of awareness of the Internet, using the Internet to deeply transform their production and sales processes and obtain huge benefits from the development of the Internet. In order to take advantage of the information infrastructure and the knowledge spillover of the Internet industry, manufacturing enterprises accelerate their agglomeration in these areas, showing a state of agglomeration in terms of spatial distribution. Therefore, in areas with rapid Internet development, there is often a trend of manufacturing agglomeration.

Based on the above analysis, this paper proposes Hypothesis 1: the development of the Internet has increased the degree of agglomeration of the manufacturing industry.
The development of the Internet has a direct impact on the degree of manufacturing agglomeration. At a deeper level, the development of the Internet further promotes the agglomeration level of the manufacturing industry by improving the level of infrastructure construction and knowledge spillover as an intermediary. China’s “14th Five-Year Plan” proposes to implement urban renewal actions, clarify the important position of the concept of resilient development in urban development, incorporate IoT sensing facilities and communication systems into the unified planning of public infrastructure, and promote the construction of new smart cities at different levels in order to realize the application and intelligent transformation of the Internet of Things corresponding to municipal facilities and buildings [13]. In the process of promoting the implementation of the “Guiding Opinions of the State Council on Actively Promoting the “Internet +” Action,” a very important guarantee basis is the infrastructure investment closely related to the development of the Internet. These measures to promote infrastructure construction continue to make the Internet sink into all walks of life, fields, and regions and realize the ubiquitous interconnection of people, machines, and products in the manufacturing industry. Therefore, the development of the Internet has driven infrastructure investment, including information infrastructure, and provided the necessary foundation for the digital and intelligent development of the manufacturing industry. The investment in these infrastructures enhances the agglomeration ability of existing manufacturing enterprises for production factors, enables manufacturing enterprises to allocate production factors in a wider range and in depth, and improves the overall agglomeration degree of the manufacturing industry chain. It shows that the manufacturing industry is agglomerated in areas with better infrastructure conditions.

Thus, this paper proposes Hypothesis 2: in the process of Internet development increasing the degree of manufacturing industry agglomeration, manufacturing infrastructure investment plays an intermediary effect.

As a spatially compressible technology, the development of the Internet and related communication technologies greatly compresses the space-time distance between different regions, and on the other hand, greatly compresses the time cost of knowledge exchange in different regions, which has a great impact on knowledge diffusion [14]. The Internet makes information exchange between manufacturing enterprises more convenient, promotes cooperation and exchanges between production enterprises and R&D institutions, generates richer professional knowledge in science and technology, and can be widely disseminated in different departments [15]. Knowledge spillover is an important reason for the agglomeration of manufacturing industries. Microsubjects agglomerated in geographic space can make full use of the external effects generated by knowledge spillovers to enhance the technological innovation capabilities of manufacturing microsubjects. The knowledge and information exchanged on the Internet belong to codable explicit knowledge. The Internet can transmit explicit knowledge instantaneously, which enhances the convenience and timeliness of knowledge spillovers and expands the scope of knowledge spillovers. On the other hand, there is a lot of tacit knowledge in the manufacturing industry, and the effect of this tacit knowledge on the agglomeration of the manufacturing industry cannot be ignored. If this tacit knowledge can be transformed into codable explicit knowledge, it will greatly promote the agglomeration effect of manufacturing. The Internet platform establishes a manufacturing technology exchange community, so that tacit knowledge can be transformed into explicit knowledge. The application of the industrial Internet records the tacit knowledge in the production process, sales process, and product use process of the manufacturing industry in the form of standard data, analyzes and simulates, builds a “digital twin” model on the Industrial Internet platform, and finally transforms the manufacturing industry. In the process, a large number of “silent technologies” and “silent processes” are transformed into codable explicit knowledge, which greatly improves the overall level and efficiency of knowledge spillovers and further agglomerates the manufacturing industry.

Finally, this paper proposes Hypothesis 3: Knowledge spillover effects play a mediating role in the process of Internet development promoting the degree of manufacturing agglomeration.

4. Model Construction, Variable Selection, and Data Sources

4.1. Econometric Model. According to the mediation effect test procedure proposed by Wen [16], we empirically analyze the mechanism through which Internet development affects the degree of industrial agglomeration in China’s manufacturing industry.

Step 1. Construct a panel data fix effect model to analyze the total effect of progression of Internet to manufacturing agglomeration in China.

\[ lq_{it} = \alpha + \beta_0 \text{inter}_{it} + \beta_1 X_{it} + \mu_{it}, \]

where \( i \) represents individual and \( t \) is time. \( Lq \) is manufacturing agglomeration, \( \text{inter} \) is progression of Internet and \( X \) captures all other control variables.

Step 2. Construct a panel data fix effect model to analyze the effect of Internet to manufacturing investment and that of knowledge spillover.

\[ \text{invest}_{it} = \beta_2 + \beta_3 \text{inter}_{it} + \beta_4 X_{it} + \epsilon_{it}, \]

\[ \text{Scale}_{it} = \beta_5 + \beta_6 \text{inter}_{it} + \beta_7 X_{it} + \varphi_{it}. \]

Step 3. Incorporate the degree of progression of Internet, knowledge spillover, and investment to an integrated model to perform mediation test.

\[ lq_{it} = \beta_8 + \beta_9 \text{inter}_{it} + \beta_{10} \text{invest}_{it} + \beta_{11} X_{it} + \varphi_{it}, \]

\[ lq_{it} = \beta_{12} + \beta_{13} \text{inter}_{it} + \beta_{14} \text{know}_{it} + \beta_{15} X_{it} + \gamma_{it}. \]
4.2. Variable Selection. Dependent variable: manufacturing industry agglomeration degree (lp) is based on the manufacturing location entropy index of each province and city. Core explanatory variable: the number of Internet users per 100 people is used as a proxy indicator of the degree of Internet development (inter), which can better reflect the degree of Internet development [8]. Mediating variable: manufacturing infrastructure investment (invest), which is represented by the investment intensity of manufacturing fixed assets, and is measured by the proportion of the provincial total social manufacturing fixed asset investment in the regional GDP. Knowledge spillover (know) is measured by the number of domestic patent applications granted by CNNIC are from 2006, which is relatively comprehensive and complete, so this paper starts with 2006 as the starting point for research, and uses the principal component analysis method to measure the Internet-related indicators in the early stages. It is found that the Internet penetration rate is the most representative indicator of the development of the Internet. Since the Internet-related indicators and data publicly disclosed by CNNIC are from 2006, which is relatively comprehensive and complete, so this paper starts with 2006 to carry out the corresponding research. The data come from the 2006–2017 “China Statistical Yearbook,” “China Science and Technology Statistical Yearbook,” “China Industrial Statistical Yearbook” and “Statistical Report on Internet Development in China.” Taking 30 provinces as a sample due to the lack of relevant data on Hong Kong, Macao, Taiwan, and Tibet, all data are standardized as shown in Table 1. Control variable: the urbanization level (city) is the ratio of the urban population to the total population at the end of the year. A higher level of urbanization provides abundant human capital elements for manufacturing agglomeration, promotes knowledge spillover, and improves the level of agglomeration [17]. The degree of government intervention (gov) is the proportion of fiscal expenditure to regional GDP [18]; the degree of opening to the outside world (open) is the ratio of the total investment of foreign-invested enterprises to the population of the region; the efficiency wage (wages) is the ratio of the average wage of manufacturing urban employees to the regional industrial added value; the proportion of the tertiary industry (service) is the added value of the tertiary industry; railway density (rail) is the ratio of railway operating mileage to the land area of each province; financial development (financial) is the ratio of financial institutions’ end-of-year deposit and loan balance to GDP [18]; market scale (scale) is the regional. The ratio of per capita GDP to national per capita GDP.

4.3. Data Description. This paper takes the Internet penetration rate as the starting point for research, and uses the principal component analysis method to measure the Internet-related indicators in the early stages. It is found that the Internet penetration rate is the most representative indicator of the development of the Internet. Since the Internet-related indicators and data publicly disclosed by CNNIC are from 2006, which is relatively comprehensive and complete, so this paper starts with 2006 to carry out the corresponding research. The data come from the 2006–2017 “China Statistical Yearbook,” “China Science and Technology Statistical Yearbook,” “China Industrial Statistical Yearbook” and “Statistical Report on Internet Development in China.” Taking 30 provinces as a sample due to the lack of relevant data on Hong Kong, Macao, Taiwan, and Tibet, all data are standardized as shown in Table 2.

5. Empirical Results and Analysis

5.1. Unit Root Test. Before performing the provincial panel data regression, the stationarity of the panel data should be tested. Since the disturbance term of the model may have autocorrelation, the Fisher-ADF test with different unit root conditions, and the LLC test with the same unit root condition are mainly adopted. The test results show that after centering the data, each variable has passed the stationarity test as shown in Table 3.

5.2. Test of the Total Effect of Internet Development on Manufacturing Agglomeration. The total effect of Internet development on manufacturing agglomeration is also the first step of the mediation effect model. Nationally, the influence coefficient of Internet development on the agglomeration degree of China’s manufacturing industry is 0.119, and it is significant at the 1% level, which is consistent with Hypothesis 1.

From the perspective of the eastern, central, and western regions of China, the coefficients of Internet development in the eastern and central regions of manufacturing agglomeration are 0.046 and 0.025, respectively, but they are not significant, indicating that Internet development is not significant in improving the manufacturing agglomeration in the eastern and central regions. The coefficient of Internet development on the agglomeration of manufacturing in the western region is 0.31, and it is significant at the 1% level, indicating that Internet development has improved the agglomeration of manufacturing in the western region. According to previous research, this result is due to the fact that the manufacturing industry in the eastern and central regions uses the Internet for platform transformation, and its production does not need to be concentrated in a certain region but uses the Internet for cross-regional production factor allocation and production capacity allocation plans, which, in fact, reduces the degree of manufacturing agglomeration in the eastern and western regions. However, the development of the manufacturing industry in the western region is still relatively backward. It should rely on the Internet to carry out the information transformation of the manufacturing industry and promote the integrated development of the two industries in the manufacturing industry. The result is to improve the information infrastructure and development level of the manufacturing industry. The development created favorable conditions, which in turn accelerated the agglomeration of manufacturing in the western region as shown in Table 4.

5.3. Test of the Mediating Effect of Internet Development on Manufacturing Agglomeration. Nationally, the influence coefficient of Internet development on manufacturing agglomeration is 0.119, and it passes the significance test at the 1% level. In Step 2 and Step 3 of the mediation effect test, the variable of manufacturing infrastructure investment is first included. In Step 2, the influence coefficient of Internet development on manufacturing agglomeration is 0.146, which is significant at the level of 5%, indicating that Internet development has promoted investment in manufacturing infrastructure. In Step 3, Internet development and manufacturing infrastructure are combined. At the same time, facilities are used as explanatory variables to conduct regression to study its impact on manufacturing agglomeration. The result is that the impact coefficient of Internet
## Table 1: Variable description.

| Name                        | Description                      | Indicator |
|-----------------------------|----------------------------------|-----------|
| Independent variable        | Manufacturing agglomeration      | lp        |
| Core explanatory variable   | Internet development             | Inter     |
| Mediators                   | Manufacturing infrastructure investment | Invest |
|                             | Knowledge spillover              | Know      |
| Controls                    | Urbanization                     | City      |
|                             | Government intervention          | Gov       |
|                             | Openness                         | Open      |
|                             | Efficient wage                   | Wages     |
|                             | Proportion of tertiary industry  | Service   |
|                             | Railway density                  | Rail      |
|                             | Financial development            | Financial |
|                             | Market scale                     | Scale     |

## Table 2: Summary of standardized data.

| Name                        | Mean  | Standard dev |
|-----------------------------|-------|--------------|
| Independent variable        | 0.697 | 0.209        |
| Core explanatory variable   | 0.464 | 0.242        |
| Mediators                   | 0.35  | 0.198        |
|                             | 0.094 | 0.157        |
| Controls                    | 0.243 | 0.177        |
|                             | 0.283 | 0.134        |
|                             | 0.42  | 0.221        |
|                             | 0.255 | 0.177        |
|                             | 0.086 | 0.139        |
|                             | 0.057 | 0.102        |
|                             | 0.279 | 0.174        |
|                             | 0.226 | 0.2          |

## Table 3: Unit root test.

| Name    | LLC test | P value | ADF test | P value | Conclusion |
|---------|----------|---------|----------|---------|------------|
| Lq      | -3.5924  | 0.0002  | 148.2815 | 0.0000  | Stationary |
| Inter   | -12.4499 | 0.0000  | 258.0586 | 0.0000  | Stationary |
| Invest  | -5.1423  | 0.0000  | 151.3541 | 0.0000  | Stationary |
| Know    | -5.9255  | 0.0000  | 105.9378 | 0.0002  | Stationary |

## Table 4: The Total effect of the Internet Development.

| Name                        | National level | East China | Middle China | West China |
|-----------------------------|----------------|------------|--------------|------------|
| Core explanatory variable   | Inter          | 0.119 ***  | (3.39)       | 0.046 (1.31) | -0.025 (-0.29) | 0.310 *** (3.54) |
|                             | City           | 0.497 ***  | (4.87)       | 0.673 *** (5.46) | -0.117 (-0.57) | 0.048 (0.23) |
|                             | Gov            | -0.175 *** | (-3.03)      | -0.010 (-0.08) | 0.139 (0.62) | -0.246 *** (-3.08) |
|                             | Open           | 0.122 **   | (2.50)       | 0.139 *** (3.59) | 1.190 (1.59) | -0.170 (0.53) |
|                             | Wages          | 0.063 **   | (2.40)       | 0.007 (0.24) | 0.096 * (1.91) | 0.100 * (2.26) |
|                             | Service        | -1.112 *** | (-23.44)     | -0.960 *** (-12.07) | -0.958 *** (-8.70) | -1.095 *** (-14.79) |
|                             | Rail           | 0.393 ***  | (4.98)       | 0.158 ** (2.10) | 1.002 *** (3.44) | -0.081 (-0.33) |
|                             | Financial      | 0.215 **   | (2.06)       | -0.036 (-0.38) | 1.283 *** (3.50) | 0.255 (1.24) |
|                             | Scale          | 0.440 ***  | (4.33)       | 0.136 (1.44) | 2.628 *** (6.47) | 0.374 * (1.73) |
development on manufacturing agglomeration has dropped to 0.085, which is significant at the 5% level, and the coefficient of manufacturing infrastructure on manufacturing agglomeration is 0.235, which is significant at the 1% level. Obviously, after the variable of manufacturing infrastructure is included, the influence coefficient of Internet development on manufacturing agglomeration drops from 0.119 to 0.085, suggesting that in the process of Internet development improving the degree of manufacturing industry agglomeration, manufacturing infrastructure investment plays an intermediary effect. Since the influence coefficient of Internet development on manufacturing agglomeration is still significant in Step 3, it shows that Internet development is only a partial intermediary process.

Secondly, incorporating the variable of knowledge spillover, in Step 2, the coefficient of Internet development on knowledge spillover is 0.120, which is significant at the level of 5%, indicating that Internet development promotes knowledge spillover; in Step 3, Internet development and knowledge spillover are combined. The study highlights that after incorporating the variable of knowledge spillover, the influence coefficient of Internet development on manufacturing agglomeration decreases from 0.119 to 0.108, which is significant at the level of 1%, indicating that knowledge spillover effect is in the Internet development to promote manufacturing industry. There is a mediating effect in the process of agglomeration, which is consistent with theoretical hypothesis 3. Similarly, in Step 3, the influence coefficient of Internet development on manufacturing agglomeration is still significant, indicating that Internet development is only a partial intermediary process, that is, only part of the impact of Internet development on manufacturing agglomeration is achieved through knowledge spillovers.

The empirical results show that the development of the Internet will not only have a direct impact on manufacturing agglomeration, but also indirectly promote the level of manufacturing agglomeration in China through manufacturing infrastructure and knowledge spillovers as shown in Table 5.

6. Concluding remarks

We use China’s provincial panel data from 2006 to 2017 to empirically study the impact of Internet development on the degree of manufacturing agglomeration at the national and regional levels, and further use the intermediary utility model to study the mechanism through which Internet development promotes manufacturing agglomeration. At the national level, the development of the Internet has significantly promoted the agglomeration of China’s manufacturing industry. In-depth research using the mediation effect model documents that the development of the Internet has improved the level of industrial agglomeration in the manufacturing industry by promoting the development of manufacturing infrastructure, and higher investment in manufacturing infrastructure has improved the industrial chain integration ability of manufacturing enterprises and the ability to attract production factors. Finally, Internet development promotes the spatial agglomeration of manufacturing by increasing the level and efficiency of knowledge spillovers. Specifically, tacit knowledge is codified through the Internet and transformed into explicit knowledge, which facilitates the spillover of craftsmanship, skills, and technologies within the manufacturing industry, improves the level of knowledge spillover, and makes a large number of manufacturing industries shift to the level and efficiency of knowledge spillover.

Based on the above research conclusions, we can draw the following relevant policy recommendations. 1. Continue to push the “Internet +” action plan to promote the deep integration and development of Internet and manufacturing. For the regions with rapid Internet development in the eastern and central regions, the establishment of industrial Internet platforms should be promoted as soon as possible, the transformation of manufacturing enterprises from digitalization to intelligence should be accelerated, and manufacturing enterprises should be encouraged to join the established industrial Internet platforms. For universities, they could form a new plan to cultivate relevant counterparts in industrial Internet, big data, and intelligent
manufacturing. 2. Increase investment in Internet infrastructure and manufacturing infrastructure. Specifically, the promotion of 5G technology should be accelerated, the application of 5G technology in the manufacturing industry should be promoted, and manufacturing enterprises should be encouraged to speed up the application of IoT technology to realize the interconnection of human, machine, and things. 3. Build an information exchange platform to further promote knowledge spillovers. We hope to encourage technology developers to form technology forums on the Internet, form knowledge and information exchange groups, build online technology exchange communities, and encourage manufacturing enterprises with the ability to integrate upstream and downstream industries in the industry to build their own online “circle of friends.” 4. Implement differentiated Internet development strategies. Empirical research shows that the development of the Internet has different effects on the agglomeration effect of manufacturing in different regions of the country. Therefore, the integrated development of the Internet and manufacturing in the eastern, central, and western regions should be adapted to local conditions and cannot adopt the same development route. The eastern and central regions should give full play to the agglomeration effect of the Internet on manufacturing production factors, attract high-end production factors, and form a new manufacturing development model. At this stage, the western region should focus on using Internet technology to improve the production efficiency of traditional manufacturing and attract manufacturing.

Data Availability

The datasets used and/or analyzed during the current study are available from the corresponding author on reasonable request.

Conflicts of Interest

The authors declare no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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