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A Study on the Incubation Mechanism and Development Pathways of E-commerce "New Farmers" as Internet Celebrities under the Rural Revitalization Strategy

Jingjing Fang

School of Economics and Management, Anhui Communications Vocational & Technical College, Huainan, 230051, China

Abstract

Against the backdrop of the rural revitalization strategy, the incubation mechanism for e-commerce "new farmer" internet celebrities lacks systematic mathematical and theoretical support, limiting policy precision and resource allocation efficiency. This paper employs the Lotka-Volterra competition equation to model the ecological evolution of regional internet celebrity populations, applies Pontryagin's optimal control theory to solve the intertemporal optimal strategy for individual content production, and develops a nonlinear programming model with budget constraints to analyze the optimal allocation of government investment. The study finds that:(1) There is a diminishing marginal relationship between the steady-state number of internet celebrities $N*$and government investment H , with an "input saturation effect" emerging as the market capacity constraint K tightens;(2)The optimal content structure ratio $o*/s*=\rho f*/[\gamma(F-f*)]$ exhibits life cycle characteristics, requiring a significant increase in the proportion of organic content during the mature stage to maintain fan retention;(3) The optimal per capita investment $x*$is independent of the total budget B, validating the policy logic of "standardized investment and elastic scaling".This research fills the mathematical-theoretical gap in the "new farmer" internet celebrity economy, providing a comprehensive analytical framework—from macro-level layout to micro-level operations, and from individual incentives to institutional design—for county-level e-commerce talent policies

Keywords

Rural Revitalization Strategy; E-commerce Internet Celebrities; New Farmers; Incubation Mechanism; Development Pathways.

1. Introduction

New farmer internet celebrities have become key micro-level actors in rural revitalization. China's rural online retail sales have exceeded 3 trillion yuan, with live-stream e-commerce contributing over 35% of this total, spawning iconic IPs such as "Zhang Tongxue" and "Kangzai Nongren". However, structural dilemmas lie beneath this apparent prosperity: over 60% of rural streamers stop updating their content within six months of launching their channels, reflecting the "double-high" characteristics of high entry rates and high elimination rates. Government-led e-commerce training programs often suffer from the "sprinkle pepper" approach to investment—spreading resources too thinly—where insufficient per capita funding leads to "broad coverage with limited results", making it difficult to build a sustainable talent pipeline.

Research on the incubation mechanisms of new farmer internet celebrities under the rural revitalization strategy is still in its infancy, but existing literature has conducted preliminary explorations from three dimensions:At the level of spatial agglomeration: Huang Jinkang [错误!未找]

到引用源。(2026) used data from Taobao villages to characterize the spatial agglomeration patterns of county-level e-commerce, while Long Juan (2025) applied spatial econometric models to test the impact of digital infrastructure on rural e-commerce penetration rates. However, most studies remain limited to describing static distributions, lacking long-term tracking of the dynamic evolution of internet celebrity populations.At the level of content production: Shen Beibei (2024) summarized the content production paradigms of rural streamers.At the level of government investment: Feng Minxian (2022) evaluated the short-term income effects of e-commerce training programs, and Hu Qingling (2021) explored the "full-chain" vocational training model for the e-commerce live-streaming industry. Yet these studies have not yet addressed the optimal budget allocation problem between "targeted cultivation" and "universal coverage".

Existing research on new farmer internet celebrities mostly remains at the level of case descriptions and policy recommendations, lacking systematic mathematical and theoretical support. Specifically, three theoretical gaps persist:The dynamic evolution law of regional internet celebrity populations remains unclear, with no quantitative basis for the matching relationship between government investment and market capacity.At the individual level, the intertemporal optimization mechanism of content production is underexplored, and there is no dynamic decision-making framework for balancing "gaining followers" and "monetization".At the institutional level, optimal standards for budget allocation are undefined, and there is a lack of cost-benefit analysis to guide strategic choices between "targeted cultivation" and "universal coverage".

This paper employs the Lotka-Volterra competition equations to model the ecological evolution of regional internet celebrity populations, uses Pontryagin's Optimal Control Theory to solve the intertemporal optimal strategies for individual content production, and develops a nonlinear programming model with budget constraints to analyze the optimal allocation of government investment. By introducing ecological population dynamics, optimal control theory, and constrained optimization methods into research on new farmers, this study constructs a systematic mathematical model framework that fills theoretical gaps in the internet celebrity economy and expands the interdisciplinary research boundaries of agricultural economics and digital economics.

2. Literature review

2.1. New Farmer Internet Celebrities

Existing literature pays relatively limited attention to this topic, with relevant studies mainly focusing on the media image construction and digital labor process of new farmers. From the perspective of discursive mechanisms, Guo Wanjun and Yu Chunsheng (2024) revealed the multiple production logic behind the image of agricultural, rural and peasant internet celebrities as "new farmers", pointing out that such images are shaped jointly by mainstream narratives, consumption discourses and commercial capital. Based on empirical analysis of the Douyin platform, Wang Yu et al. (2026) systematically explained the path dependence and strategic choices of new farmers in constructing self-images through digital labor. Adopting the theoretical framework of domestication theory, Zhang Mengfei (2024) found that new farmer KOLs face dual tensions from platform algorithmic discipline and local social network relations in live-streaming sales practices. Nevertheless, most of the above studies remain confined to static phenomenon description and mechanism interpretation, failing to construct an intertemporal optimization model for individual content production decisions, and the dynamic trade-off mechanism between follower growth and monetization remains unclear.

At the regional and organizational levels, based on a comparative study of Guangxi, Hebei and Sichuan provinces, Liu Nan (2024) refined three types of media practices from the perspective of solidarity theory: platform e-commerce organizationalization, external force embedded organizationalization, and resource re-embedded organizationalization. She also revealed the differentiation effect of regional environmental differences and resource allocation on organizational solidarity forms. By adopting kernel density estimation and Exploratory Spatial Data Analysis (ESDA), Xie Chanman (2025) depicted the "one core and two sub-centers" spatial agglomeration pattern of new farmer streamers in Guangdong Province and its formation mechanism. Overall, however, existing research is still dominated by cross-sectional analysis, lacking long-term tracking of the dynamic evolution of internet celebrity numbers at the regional level, and the matching relationship between government investment scale and market carrying capacity has not been quantitatively demonstrated.

At the institutional and performance levels, based on Signaling Theory and Social Identity Theory, Zhu Wenchao (2025) adopted cross-sectional data of 2,300 new farmers on the Douyin Shop platform to empirically test the promotion effect of online reputation on sales performance and its boundary conditions. Taking characteristic agricultural product e-commerce in Pingliang as a case study, Zhang Qian (2025) diagnosed structural dilemmas in the human resource development of "new farmers", including talent shortage, competency mismatch and imperfect training systems. Nevertheless, existing research has not yet addressed the optimal criteria for the allocation of government training budgets, and a cost-benefit analysis framework for the strategic choice between targeted cultivation and universal coverage is still absent.

In summary, although existing studies have covered dimensions such as individual image construction, regional spatial differentiation and institutional performance evaluation, they are characterized by scattered research topics, single research methods and insufficient theoretical integration. The intertemporal decision-making mechanism at the individual level has not been incorporated into the dynamic optimization perspective; the evolutionary law of internet celebrity quantity at the regional level lacks support from mathematical models; and the budget allocation criteria at the institutional level are devoid of systematic cost-benefit analysis. The above theoretical gaps provide necessary academic space for this study to construct a three-dimensional linkage analytical framework of regional dynamic evolution–individual intertemporal optimization–institutional optimal allocation.

2.2. Content Production of Rural Internet Celebrities

Existing literature has formed a preliminary research scale on the media practices of rural internet celebrities, yet research perspectives are highly fragmented and no systematic theoretical dialogue has been established.In terms of image construction and identity production, applying Dramaturgical Theory, Li Zhuolin (2025) conducted a six-month participant observation of 20 young female agricultural and rural internet celebrities, and found that this group faces structural dilemmas including dual expropriation by platform capital and the digital panopticon in self-presentation. Focusing on the media image construction of silver-haired rural internet celebrities, Gu Yating (2025) pointed out that their images suffer from alienation, shielding and trivialization under the impact of commercialization and pan-entertainment. These studies have deepened the understanding of the image production logic of different groups, but they mostly stay at the stage of static mechanism interpretation, lacking mathematical characterization of the dynamic evolution law of image construction.In terms of content production and communication strategies, based on an analysis of Douyin's "New Farmer Program 2024", Su Feiyue (2025) pointed out that the "light popular science" communication of rural internet celebrities has obvious shortcomings in content scientificity and technical risk prevention. Taking the "rose" account as a case study, Tian Yingying (2025) revealed the unique path of foreign-related rural internet celebrities in content production via cross-cultural perspectives and emotional resonance. With the aid of

Media Situation Theory, Yang Haochen (2024) systematically analyzed the scenario construction logic of "people-goods-scenario" in agriculture-assisting live streaming. Through text analysis of the content production characteristics of herdsman internet celebrities, Su Rina (2024) identified problems such as simplistic narrative modes and uneven content quality. These studies enrich the typological understanding of content production, but fail to establish a quantitative correlation model between content quality and communication effect, let alone explore creators' intertemporal optimal decision-making between follower growth and monetization.In terms of spatial distribution and community effects, through field investigations of three grassroots internet celebrities in Tibetan-inhabited areas of Sichuan, Wang Tian (2025) found that their communication practices have exerted profound impacts on the community's economic structure, relational networks and power patterns. Even so, existing research is still dominated by cross-sectional analysis or in-depth case description, lacking long-term tracking of the dynamic evolution of internet celebrity quantity, and the matching relationship between government investment scale and market carrying capacity has not been quantitatively verified.

To conclude, current research suffers from a threefold separation: separation between macro policies and micro behaviors, separation between static allocation and dynamic evolution, and separation between theoretical construction and empirical data. By constructing a three-level progressive model, this study realizes:

(1) cross-level linkage between macro population dynamics and micro individual decision-making;

(2) intertemporal integration of short-term allocation efficiency and long-term growth paths;

(3) mutual verification between theoretical derivation and numerical simulation.

3. Model

3.1. Model Foundation and Assumptions

This section constructs three progressive mathematical models to systematically address the key scientific issues in the incubation of new farmer internet celebrities. The research questions are defined as follows:(1) Under resource constraints and market competition, how does the number of new farmer internet celebrities at the county level evolve over time? Does a steady-state equilibrium exist? What marginal effect does government investment exert on the steady-state density?(2) Facing the investment-consumption trade-off in content production, how does an individual internet celebrity dynamically adjust the ratio of organic content to commercial content to maximize lifetime discounted income?(3) Under a hard budget constraint, how should the government optimally allocate resources between broad coverage and intensive cultivation to maximize the number of successfully incubated internet celebrities?

Technical Assumption 1: The ecosystem of new farmer internet celebrities at the county level is an open dissipative structure that continuously exchanges materials and energy with the external labor market. Potential talents flow in naturally at a constant rate (α), reflecting the continuous influx of returning youth, veterans, college-educated village officials and other groups under the rural revitalization strategy. Meanwhile, density-dependent competition inhibition exists within the system. As the internet celebrity density ($\frac{N}{K}$) rises, the market becomes saturated, the opportunity cost for new entrants increases, and the competition inhibition effect is proportional to the internet celebrity density with a coefficient of (β)). In addition, potential talents are transformed into mature internet celebrities with an efficiency coefficient (γ) driven by incubation resources (H), while mature internet celebrities exit naturally at a rate (δ) (due to career changes or failures), reflecting the high elimination characteristic of the industry.

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Technical Assumption 2: As a rational economic agent, an individual internet celebrity faces an intertemporal investment-consumption trade-off: organic content (o(t)) accumulates fans but generates no direct monetary income, while commercial content ($s(t)$) brings immediate revenue but impairs fan growth. Fan accumulation follows a modified Logistic dynamics: organic content attracts new fans through platform algorithms (efficiency coefficient γ, upper capacity limit F), and commercial content leads to fan unfollows (sensitivity coefficient ρ). Commercial revenue follows a logarithmic relationship with fan scale ($\pi(f) = p_0 + p_1 \ln f$), reflecting the diminishing marginal return of the internet celebrity economy. The content production cost is quadratic ($c(o,s) = \frac{w}{2}(o+s)^2$), reflecting the increasing marginal cost of creative effort. Individuals have exponential time preferences with a discount rate of *r.*

Technical Assumption 3: As the institutional provider, the county-level government faces a hard budget constraint (B) and must make an optimal choice between the broad strategy (expanding the number of incubated individuals n and reducing per capita investment x) and the intensive strategy (selecting a small number of individuals and increasing per capita investment x), subject to ($nx \leq B$) Human capital investment presents a significant threshold effect: the success probability ($p(x)$) follows a Logistic function with an investment threshold (x_0). The training effect is nearly zero when investment is below the threshold, and the success rate rises in an S-shape as investment increases beyond the threshold, with a learning curve elasticity of ($\theta > 1$) . The government's goal is to maximize the number of successfully incubated individuals, reflecting the policy orientation of prioritizing "survival rate" in rural revitalization.

Technical Assumption 4: To ensure the existence, uniqueness and stability of the model solutions, all exogenous parameters are positive real numbers and satisfy the following regularity conditions:(1) The market capacity is much larger than the initial population , guaranteeing the gradual nature of competition inhibition;(2) The learning curve elasticity ($\theta > 1$), ensuring the success probability function is first convex and then concave with a peak of marginal efficiency;(3) The time discount rate r is sufficiently small to ensure individuals value long-term reputation accumulation;(4) The exit rate (δ) and inflow rate (α) satisfy ($\alpha > \delta N^*$), ensuring the existence of a non-trivial steady state of the system;(5) The fan capacity ($F > f_0$), ensuring sufficient growth space for individuals.

Table 1 Parameter Definition

parameter	meaning	parameter	meaning
N(t)	The stock of new farmer internet celebrities at the county level at time t (individuals)	ρ	Sensitivity of fan loss to commercial content
S(t)	The pool of potential incubatable talents at time t (individuals)	p0	Base advertising unit price (yuan/post)
α	Natural inflow rate of potential talents (individuals/month)	p1	Fan scale revenue elasticity
β	Market competition intensity coefficient	w	Content production cost coefficient
γ	Incubation conversion/fan growth efficiency coefficient	r	Time discount rate
δ	Natural exit rate of internet celebrities	μ(t)	Co-state variable (shadow price of fans, yuan/individual)
K	County-level e-commerce market capacity (individuals)	n	Number of incubated individuals (individuals)
H	Government incubation resource input (ten thousand yuan/month)	x	Per capita incubation investment (ten thousand yuan/individual)

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f(t)	Number of fans at time t (individuals)	B	Government budget constraint (ten thousand yuan)
o(t)	Organic content output rate (posts/month)	x0	Investment threshold for 50% success rate (ten thousand yuan/individual)
s(t)	Commercial content output rate (items/month)	θ	Learning curve elasticity
F	Fan base size (people) in the niche market		

3.2. Dynamic Evolution of the New Farmer Internet Celebrity Ecosystem

In an open and competitive environment, the interaction between potential talents $S(t)$ and mature internet celebrities N(t) follows a modified Lotka-Volterra competition system. Drawing on ecological population dynamics, this model treats internet celebrities as a "population" competing within a limited market capacity K:

$$\begin{cases} \dfrac{dS}{dt} = \alpha - \beta S \cdot \dfrac{N}{K} - \gamma SH \\ \dfrac{dN}{dt} = \gamma SH - \delta N \end{cases} \tag{1}$$

In this system, the change in the potential talent pool is driven by three factors: natural inflow (α), crowding out due to market competition ($\beta S \cdot \frac{N}{K}$), where rising internet celebrity density intensifies traffic competition for new entrants), and conversion to mature internet celebrities under incubation resources H (γSH). The change in mature internet celebrities depends on the net effect of inflows from successful incubation and outflows due to natural exit (δN).

Steady-State Analysis: Setting ($\frac{dS}{dt} = \frac{dN}{dt} = 0$), we obtain $S^* = \frac{\delta N^*}{\gamma H}$ from the second equation. Substituting this into the first equation and rearranging yields:

$$\alpha - \frac{\beta\delta}{\gamma HK} (N^{)2} - \delta N^* = 0 \tag{2}$$

Solving this quadratic equation and taking the positive root gives the steady-state number of internet celebrities:

$$N^* = \frac{\delta K}{2\beta} \left(\sqrt{1 + \frac{4\alpha\beta}{\delta^2 K}} - 1 \right) \tag{3}$$

Comparative static analysis of Equation (3) is conducted using the implicit function theorem to examine the marginal effect of incubation investment (H):

$$\frac{dN^*}{dH} = \frac{\beta\delta (N^*)^2/(\gamma KH^2)}{2\beta\delta N^*/(\gamma HK) + \delta} > 0 \tag{4}$$

Equation (4) shows that increasing incubation investment always raises the steady-state number of internet celebrities. However, calculating the elasticity coefficient $\varepsilon_{N^*,H} = \frac{\beta N^*}{\beta N^* + \gamma HK}$ reveals that $\varepsilon_{N^*,H} \to 0$ as $H \to \infty$,indicating an input saturation effect. When internet celebrity density approaches market capacity, additional investment primarily maintains the existing stock rather than generating new growth. At this stage, governments should shift focus from quantity expansion to quality improvement.

3.3. Intertemporal Decision-Making in Internet Celebrity Content Production

An individual internet celebrity maximizes lifetime discounted income, with fan accumulation following modified Logistic dynamics:

$$\frac{df}{dt} = \gamma o\left(1-\frac{f}{F}\right) - \rho s\frac{f}{F}, \quad f(0) = f_0 \tag{5}$$

The objective function is:

$$J = \int_0^\infty e^{-rt}\left[(p_0 + p_1 \ln f)s - \frac{w}{2}(o+s)^2\right]dt \tag{6}$$

By Pontryagin's Maximum Principle, define the state variable f(t) (number of fans) and control variables o(t),s(t) (content output rates). Construct the Current-Value Hamiltonian (where ($\mu(t)$)is the co-state variable, representing the shadow price of fan stock):

$$H = (p_0 + p_1 \ln f)s - \frac{w}{2}(o+s)^2 + \mu\left[\gamma o\left(1-\frac{f}{F}\right) - \rho s\frac{f}{F}\right] \tag{7}$$

First-order necessary conditions are obtained by differentiating with respect to the control variables:

$$\frac{\partial H}{\partial o} = -w(o+s) + \mu\gamma\left(1-\frac{f}{F}\right) = 0 \tag{8}$$

$$\frac{\partial H}{\partial s} = p_0 + p_1 \ln f - w(o+s) - \frac{\mu\rho f}{F} = 0 \tag{9}$$

Eliminating \(\mu\) by combining Equations (8) and (9) yields the steady-state content structure ratio:

$$\frac{o^*}{s^*} = \frac{\rho f^*}{\gamma(F-f^*)} \tag{10}$$

This equation reveals the evolutionary pattern of the content lifecycle: In the budding stage (f≪F), o$*/s*$≈0, so creators should focus on organic content accumulation; in the mature stage (f→F), $o*/s*$→∞, requiring a significant increase in the proportion of organic content to retain fans, as the marginal loss from commercial content becomes excessively high. This explains why top streamers often reduce the frequency of product promotion and increase "welfare content".

3.4. Quality-Quantity Trade-off in Incubation Budget Allocation

The government maximizes the number of successfully incubated individuals, with the success probability function capturing the threshold effect of human capital investment:

$$p(x) = \frac{x^\theta}{x^\theta + x_0^\theta}, \quad \theta > 1 \tag{11}$$

The optimization problem is:

$$\max_{n,x} n \cdot p(x) \quad s.t. \quad nx = B \tag{12}$$

Construct the Lagrange ($L = n \cdot \frac{x^\theta}{x^\theta + x_0^\theta} + \lambda(B - nx)$)function and solve the first-order condition:

$$\frac{\partial L}{\partial n} = \frac{x^\theta}{x^\theta + x_0^\theta} - \lambda x = 0 \tag{13}$$

$$\frac{\partial L}{\partial x} = \frac{n\theta x^{\theta-1}x_0^\theta}{(x^\theta + x_0^\theta)^2} - \lambda n = 0 \tag{14}$$

By eliminating equations (λ)(13) and (14), the optimal per capita input is obtained:

$$x^* = x_0(\theta - 1)^{1/\theta} \tag{15 }$$

and the optimal number of incubated individuals:

$$n^* = \frac{B}{x^*} = \frac{B}{x_0(\theta-1)^{1/\theta}} \tag{16}$$

The core conclusion of this analytical solution is that the optimal per capita investment x is independent of the total budget B, depending only on the learning technology parameters $((\theta, x_0))$. This means that even under fiscal constraints, governments should maintain (x^*) constant and reduce(n^*) accordingly, rather than uniformly lowering training quality in a "sprinkle pepper" manner. When $(\theta \to 1)$ (weak learning effects), $(x^* \to 0)$, justifying a "broad coverage with low yields" strategy; when $(\theta \to \infty)$ (effective elite education),$(x^* \to x_0)$, favoring a "targeted cultivation" strategy.

4. Numerical Simulation

Based on the three key analytical solutions derived from theoretical derivation—the steady-state number of internet celebrities N∗, the steady-state content structure ratio o∗/s∗, and the optimal number of incubated individuals n∗—this section constructs a three-dimensional parameter space for numerical simulation. The simulation aims to characterize:①the synergistic effect between government incubation investment and market capacity;②the structural impact of the fan lifecycle on content strategies;③the interaction between budget constraints and technological elasticity on resource allocation. The following parameters are calibrated based on Tangxu Village, Fuyang City, with the settings listed below:*α=50 (people/month),β= 0.01, δ = 0.15 (1/month), γ = 500 (people·month per post), F = 50,000 (people),* x_0 *= 2 (ten thousand yuan per person).*

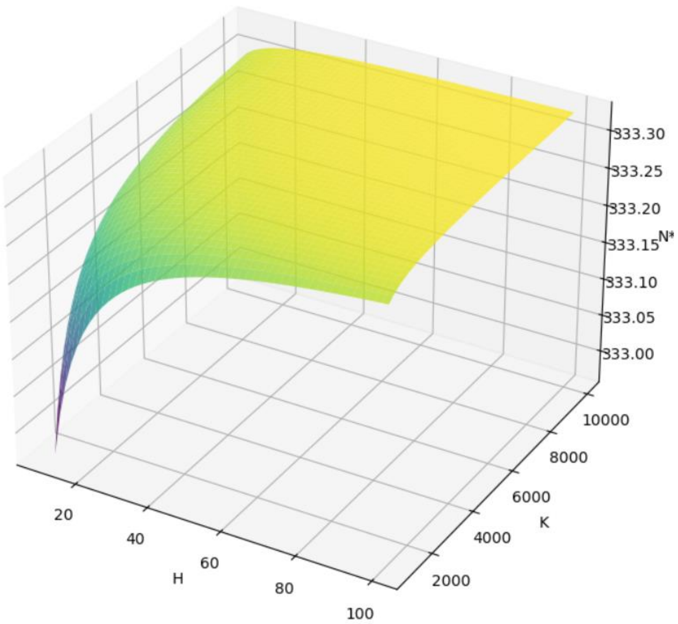

Figure 1: Surface curves showing the changes of N∗, H, and K.

As shown in Figure 1, $N*$exhibits diminishing marginal growth with respect to H and approximately linear growth with respect to K, verifying the "input saturation effect" and "market size determinism" from the theoretical analysis. When H>60and K>6000 , the slope of the surface tends to flatten, suggesting that the government should avoid excessive investment in regions with low market capacity.

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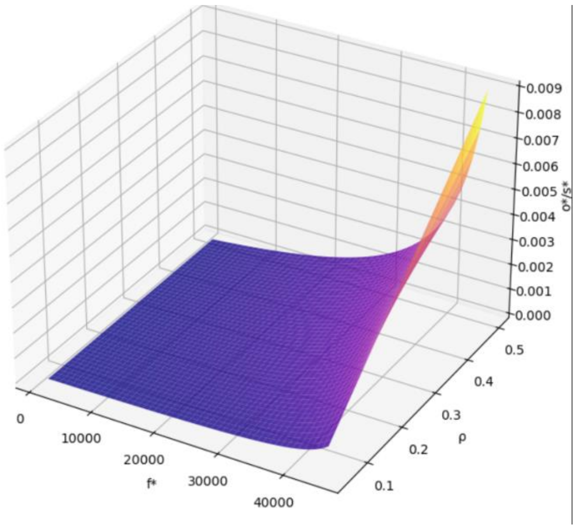

Figure 2: Evolution of o∗/s∗, f∗, and ρ

As shown in Figure 2. When $f*$ approaches the upper capacity limit F, the structure ratio rises sharply (steep increase of the surface), confirming the theoretical proposition that "the proportion of organic content should be significantly increased in the mature stage". Meanwhile, a higher ρ (greater fan sensitivity to advertising) elevates the overall structure ratio, indicating that more cautious commercialization strategies are required in high-sensitivity markets.

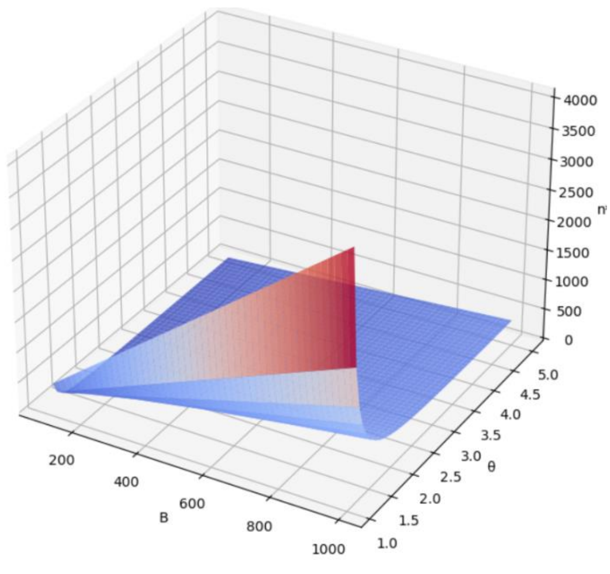

Figure 3: Changes in n∗, B, and θ

As shown in Figure 3.The surface reveals that $n*$ has a strictly linear relationship with B (consistent with the analytical solution) but a nonlinear negative correlation with θ: when $\theta \to 1$ (weak learning effects), $n*$increases sharply, supporting the "extensive cultivation with low yields" strategy; when $\theta>3$ (effective elite education), the surface flattens, supporting the "targeted cultivation" strategy. This nonlinear feature provides a quantitative basis for the government to implement differentiated policies according to local training and technological conditions.

5. Conclusion

The three models in this paper address theoretical issues at different levels. The core finding of the population competition-diffusion model—that the steady-state internet celebrity density $N*$ is more sensitive to market capacity K than to government investment H (based on elasticity coefficient comparison)—suggests that institutional supply must match market fundamentals, indicating that the primary constraint on county-level e-commerce development may be market size rather than policy intensity.This framework is applicable not only to new farmers but also to explaining the talent cultivation strategies of urban MCN institutions. However, the model assumes that platform algorithms are neutral (with γ as a constant). If strategic manipulation by platforms (such as "traffic restriction" or "traffic boosting") is considered, the model needs to be extended by introducing a game-theoretic framework. The "standardized investment" conclusion of the constrained optimization model (that $x*$is independent of B) has strong policy implications, but its validity relies on two conditions: first, the learning curve elasticity θ is stable and measurable; second, the budget constraint is a hard constraint.

Based on the model conclusions, hierarchical and classified policies are proposed. Counties are divided into three categories according to market capacity K and inflow rate α: regions with high inflow and high capacity should focus on competition regulation to prevent overcrowding; regions with high inflow and low capacity (such as remote mountainous areas) should control the entry scale and raise selection standards; regions with low inflow should lower thresholds and expand coverage. For life-cycle management, a three-stage differentiated support system is established for individual internet celebrities: the incipient stage (f<0.3F) provides subsidies for content creation and restrains premature commercialization; the growth stage (0.3F≤f≤0.7F) provides supply chain support to improve monetization efficiency; the mature stage (f>0.7F) guides social responsibility to drive rural industries. A "minimum per capita investment" system should be established, with $x*$ set as a hard constraint for fiscal fund allocation to avoid fragmented investment caused by the project-based model. It is recommended that regions with $\theta\in(1.5,2.5)$ adopt the standard of $x*\approx(0.5\sim0.8)x_0$, and regions with \(\theta>3\) adopt the elite cultivation standard of $x*\approx$x0.

The model does not consider the differences of heterogeneous individuals and ignores the strategic behavior of platforms. Steady-state analysis is difficult to explain the disequilibrium dynamics such as explosive growth (e.g., the "Zhang Tongxue" phenomenon). In the future, Agent-Based Modeling (ABM) will be introduced to simulate the interactive evolution of heterogeneous agents, a dynamic game model of platforms-internet celebrities-government will be constructed, and structural estimation will be carried out combined with field data.

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