

Gameplay as Labor in *Genshin Impact*: The Hybrid Payment Strategy of Gacha Games

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INTRODUCTION

As one of the most successful games worldwide, *Genshin Impact* (miHoYo, 2020) relies on a gacha system as its core monetization mechanism. It uses Primogems, an in-game currency, to draw characters or weapons in a lottery-like manner. Players can obtain Primogems either through active gameplay or via real-money purchases. The system incorporates a pity mechanism and progressive probabilities. While public and regulatory debates have focused almost exclusively on whether this mechanism constitutes gambling, the act of earning Primogems through gameplay has received little sociological or economic analysis. This paper addresses this gap by using *Genshin Impact* as a case study to examine player activity within the gacha economic framework.

The paper proceeds as follows. First, we conceptualize gameplay-oriented Primogem accumulation as a form of labor. Second, we formalize the expected monetary cost of acquiring a target gacha character. Third, we empirically estimate the version-by-version supply of free draws available to players. Fourth, we identify the hybrid payment model, combining gameplay labor and monetary expenditure, as a strategy of second-degree price discrimination. Finally, we discuss the theoretical implications of our findings for digital labor theory.

Gameplay as Labor

The combination of rigorous goal-orientation and structural constraints strongly suggests that this form of gameplay possesses an inherent labor property. (Woods, 2022; Zhou, 2024) Rather than a form of pure relaxation or entertainment, it operates as an activity strictly organized by game rules, executed to achieve the specific aim of accumulating Primogems. The thriving "daigan" (power-leveling and grinding) industry in secondary markets provides empirical evidence for this analysis: if gameplay did not contain a labor dimension, a tradeable service market would cease

to exist (Cao et al., 2024). Grinding services explicitly commodify and sell "gameplay time" and "task completion rates," a typical feature of the externalization and marketization of labor.

Consequently, we contend that within the context of gacha games, gameplay activities organized as a substitute for monetary expenditure can be conceptualized as labor. Although various discussions on labor in video games have emerged since Kücklich (2005) proposed the concept of playbor, the discussion about payment remains scarce: Fuchs (2014) even once argued that the exploitation of digital labor is "unlimited", which apparently includes the game labor and is inconsistent with reality. On the basis of collected data, our study quantifies the game labor performed by players in *Genshin Impact*, as well as its form of compensation and payment, the primogems, which is lack of discuss currently.

The In-Game Economic Mechanism: Expected Price and the Sources of Free Draws

The probabilistic nature of the gacha system reveals the uncertainty of the specific price to acquire a particular items to individual players. However, from a macroeconomic statistical perspective, the "true price" players should pay for items is dictated by its mathematical expected price due to algorithmic designs such as the pity mechanism:

Expected Monetary Cost

$$= \text{Monetized Price per Draw} \times (\text{Expected Draws} - \text{Free Draws})$$

Here "Free Draws" refers to the number of draws equivalent to the Primogems earned by players through gameplay without extra payment. In *Genshin Impact*, the channels for acquiring these primogems are strictly limited to configurations pre-established by miHoYo, spanning from Daily Commissions, version update rewards, time-confined events, the Spiral Abyss, to random chests from open-world exploration. The mutual characteristic of these channels is that they mandate player online presence and demand time-spending engagement in rigidly prescribed forms. More importantly, the aggregate amount of obtainable Primogems within each version is capped by an absolute ceiling. This implies that regardless of the additional time a player invests, the upper limit of labor that can be utilized to offset monetary expenditure is predetermined by the developer.

Data Measurement: The Supply and Monetary Value of Free Draws

To quantify this gameplay-derived subsidy, we estimate the version-by-version supply of gameplay-earned Primogems from publicly available game data and community-compiled statistics (Figure 1); these figures are indicative and may contain minor inaccuracies. The statistical scope comprises two categories of acquisition channels. Permanent (one-time) sources denote exhaustible content obtainable only once per account, including Archon and Story Quests, open-world chests, world quests, Teleport Waypoints, Statues of the Seven, achievements, and comparable one-off rewards. Time-limited (recurring) sources denote channels that reset with every version cycle and thus constitute a steady flow, including Daily Commissions, version events, the Spiral Abyss, the Stardust Exchange, mail compensation, redemption codes, and web check-in campaigns. Converted at 160 Primogems per draw, the cumulative supply across versions v1.0–v7.0 amounts to approximately 4,183 draws, of which recurring channels contribute about 3,392 ($\approx$

80.4 per version on average), while permanent sources account for roughly 791. In other words, under the developer's configuration, a player's labor within a single version cycle is institutionally capped at a level equivalent to roughly eighty draws which is strikingly close to the first pity threshold.

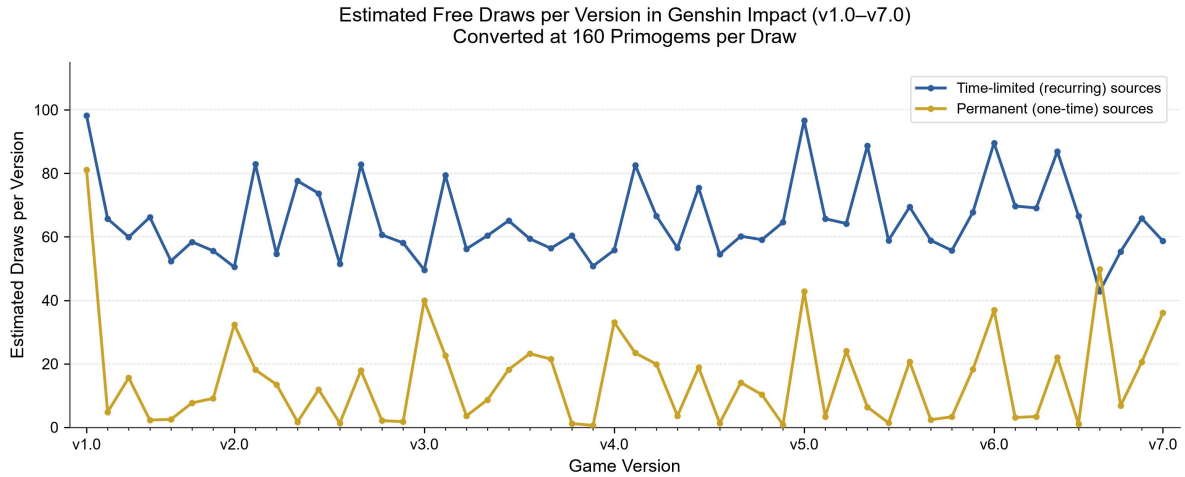


Figure 1. Estimated free draws obtainable per version in Genshin Impact (v1.0–v7.0), converted at 160 Primogems per draw. Blue: time-limited (recurring) sources; gold: permanent (one-time) sources. Data compiled from publicly available information and online community statistics; figures may contain minor inaccuracies.

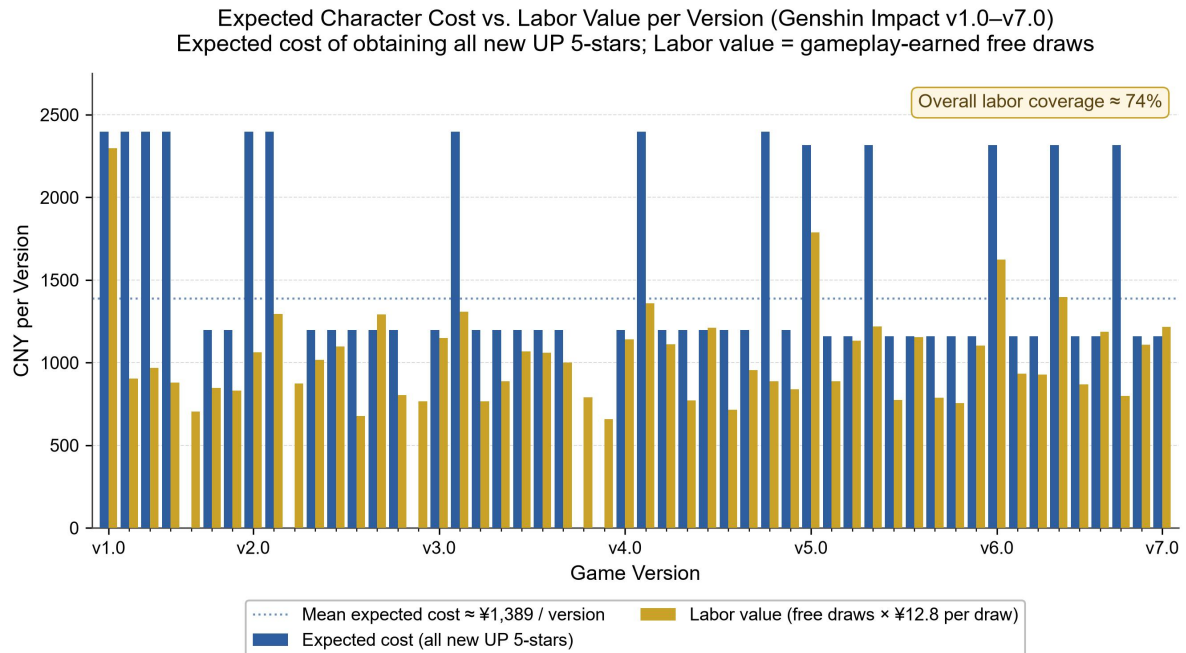


Figure 2. Expected cost of obtaining all new UP 5-star characters versus the value of gameplay-earned free draws per version (v1.0–v7.0), valued at ≈ 12.8 CNY per draw (648 CNY per 8,080 Primogems). Data compiled from publicly available information and online community statistics; figures may contain minor inaccuracies.

Figure 2 converts this supply into monetary terms. Valuing each draw at the standard retail rate (648 CNY for 8,080 Primogems, ≈ 12.8 CNY per draw), the expected cost of obtaining all 61 new limited 5-star characters across versions 1.0–7.0, roughly 93 draws per target character, or 90 under the Capturing Radiance mechanic introduced in version 5.0, amounts to approximately 72,000 CNY, while the gameplay-derived supply is worth about 54,000 CNY, offsetting 74% of the total. This compensation, however, is deliberately uneven. In versions featuring a single UP character, free draws typically cover 57%–108% of the expected cost (median $\approx 81\%$), whereas in dual-character versions coverage falls to 34%–96% with a median of only 54%. The hybrid payment architecture thus operates as a dual mechanism: it guarantees the basic reproduction of players' labor-power, while concentrating the uncovered residual precisely in versions where desire is doubled, ensuring that the final gap is filled by purchase rather than by labor.

Mixed Payment as a Price Discrimination Strategy

Synthesizing the expected value formula, when players accumulate primogems through active gameplay, they are converting their own labor into a form of mixed payment in nature. From the perspective of economy, this institutional design contains a mechanism of second-degree price discrimination. By leveraging probability and pity mechanics, developers construct a selective consumption system: players with high willingness to pay but low time elasticity gravitate toward paying for draws directly; players with low willingness to pay but high time elasticity to accumulate Primogems through sustained gameplay labor, effectively exchanging their time for price discounts.

However, the mere premise that "labor can offset currency" is insufficient to explain the core function of the probability mechanism. The critical insight lies in the fact that because the total volume of obtainable Primogems per version is fixed, developers can precisely regulate the elasticity of substitution between labor and capital by adjusting the drop rates, thereby striking an optimal equilibrium between user retention and commercial profitability(Cao et al., 2024; Ma et al., 2025).

By calibrated positioning of drop rates within an intermediate equilibrium, the developer ensures that while the pure labor route remains viable, it is designed to be exceedingly protracted, thereby incentivizing mid-to-high willingness-to-pay players to utilize fiat currency for "acceleration." Concurrently, the free Primogems distributed in each version are meticulously designed to be just sufficient to maintain continuous login behavior among active users, yet inadequate to grant them comprehensive access to all content for free.

Conclusion

Using Genshin Impact as a case, this study frames repetitive gacha gameplay as regulated digital labor shaped by capped, version-specific Primogem rewards. Its hybrid payment model enables players to substitute time for money, functioning as a form of second-degree price discrimination: players with greater willingness to spend money can purchase draws directly, while players with greater willingness to spend time can obtain them through gameplay. The results show that gameplay-derived rewards constitute a substantial but systematically limited form of compensation, covering a large share of the expected monetary cost of limited characters while leaving a persistent gap for monetary expenditure. Adjustable gacha probabilities,

pity systems, and reward caps therefore allow developers to regulate the substitution between gameplay labor and monetary payment. Beyond a random-draw mechanism, the gacha framework functions as an economic architecture that converts player time into monetizable value, differentiates consumers according to their time and monetary constraints, and supports sustained revenue generation.

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BIO

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CONFLICTS OF INTEREST

The authors declare that they have no conflicts of interest.

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