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Event-Driven Economic Behavior in Virtual Economies: Evidence from Hypixel Skyblock

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Abstract

This study investigates how consumer economic behavior changes in response to short-term, event-driven conditions, taking the "Season of Jerry" event in the virtual economy of Hypixel Skyblock as its focus. The research tracks spending, saving, and investment choices across four distinct phases: pre-event, immediate pre-event, event, and post-event, spanning December 1 to December 25, 2024. Six randomly selected players provided daily records of their financial activity in-game, which were then examined to identify recurring patterns and trends. The analysis shows that players who favored balanced strategies, built around reinvestment and the use of passive income methods, generally achieved more consistent and profitable results. By contrast, those who leaned heavily on speculative approaches or short-term consumption often experienced losses. Several real-world economic concepts could be observed in action within this virtual setting, including prospect theory, bounded rationality, and the sunk cost effect. While the modest sample size and the limitations of a game-based context make broad generalization difficult, the results suggest that virtual economies can serve as valuable environments for studying consumer behavior. They may also provide insights that are useful to educators, economists, and digital platform designers who are interested in decision-making under temporary shocks.

Keywords: *Virtual Economies; Consumer Behavior; Event-Driven Spending; Behavioral Economics*

1. Introduction

Economic actors, whether households, firms, or governments, rarely make decisions in isolation. Their choices are usually shaped by external stimuli such as new policies, temporary discounts, or seasonal events. These triggers alter perceptions of incentives, risks, and potential rewards, producing shifts in how resources are allocated. Festive sales, for instance, often push consumers to increase their spending or change purchasing priorities, while businesses recalibrate production and distribution to capture surging demand. Economists explain these adjustments through utility maximization, the principle that individuals attempt to allocate resources in ways that bring them the greatest satisfaction.

Temporal preference theory adds a further dimension by showing how consumers weigh present versus future needs, sometimes accepting short-term restraint to secure longer-term benefits. Although these frameworks were developed to understand national and global markets, they also illuminate decision-making in virtual economies, where players face comparable trade-offs under different conditions.

Virtual economies provide a distinctive research environment because they combine the freedom of naturalistic choice with the possibility of controlled intervention. Castronova, in *Virtual Economies* (2002), argues that synthetic worlds allow economists to observe behaviors that resemble those found in real societies, while retaining the ability to manipulate conditions in ways impossible in physical economies. By adjusting scarcity, altering price dynamics, or creating time-limited opportunities, researchers can watch how players respond to incentives in real time. Still, these environments differ in critical respects: scarcity may not exist in the same way it does outside the game, and developers can alter rules at little or no cost (Castronova, 2002).

Research has increasingly shown the potential of such environments for exploring consumer psychology. Toh (2021) highlights how the design of reward schedules, uncertainty, and trade-offs in games mirrors the conditions under which real consumers make choices. His study argues that games offer a natural setting for examining how people respond to risk and reward structures, providing evidence of parallels between entertainment systems and economic behavior. More recently, Zhang, Y., & Bi, X. (2024) analyzed the co-evolution of game companies and players through evolutionary game models, demonstrating how strategic interaction in online platforms is shaped by costs, benefits, regulation, and initial conditions. Their findings underline how virtual settings function as complex economies in which both sides (developers and consumers) adapt continually in response to one another. Other work has examined how temporary shocks in digital economies produce measurable shifts in behavior. Kristofferson et al. (2017) showed how event-based stimuli can alter financial decision-making, particularly under conditions of uncertainty and scarcity. Their findings suggest that the framing of incentives and the perception of temporariness play a significant role in determining consumer responses. Taken together, these studies point to virtual economies as rich laboratories for studying how incentives, uncertainty, and limited opportunities shape choices.

Hypixel Skyblock, a popular multiplayer game on the Minecraft Hypixel server, offers a detailed example of such an economy. Its currency, “coins,” circulates through a wide set of activities: farming, mining, crafting, selling to NPCs, trading commodities on the Bazaar, and engaging in speculation through the auction house. Players must decide between active labor, such as manual resource collection, and passive approaches, such as automated minions that generate income over time. They may invest heavily in tools and infrastructure, gamble on volatile price changes, or pursue hybrid strategies. Periodic updates and limited-time events serve as shocks to this economy, shifting supply, demand, and incentives in ways that test adaptability and decision-making. The “Season of Jerry” event provides a concentrated case of such dynamics. Occurring during December, it introduces exclusive content and items for a limited period. Although most Skyblock items can be reproduced indefinitely, event-related items become scarce because of time constraints. This artificial scarcity generates urgency and speculation, forcing players to weigh the potential of long-term gains against the appeal of immediate advantages. Some conserve their resources in anticipation of post-event price rises, while others spend heavily to exploit short-term opportunities. These behaviors closely resemble real-world consumer patterns during holiday sales or government stimulus programs, where temporary opportunities lead to rapid shifts in consumption, saving, and investment.

The academic literature has increasingly supported this comparison. Maynard et al. (2012) demonstrated that financial games like *Farm Blitz* and *Bite Club* improved saving and budgeting habits in the real world, while Smith (2017) used the trading environment of *EVE Online* to investigate market

efficiency and variations in risk tolerance. These studies highlight the dual role of virtual economies: they serve as entertainment systems but also as arenas where behaviors of theoretical and practical significance can be observed. Yet despite these advances, relatively little work has focused on how players in rich, unstructured virtual economies respond to temporary shocks, and how those responses align with established theories such as bounded rationality, prospect theory, or rational choice under constraints. This study seeks to address that gap by examining how Hypixel Skyblock players managed spending, saving, and investment choices before, during, and after the December 2024 "Season of Jerry." By analyzing detailed player data, the research aims to document patterns of economic response under conditions of time-limited scarcity. The goal is to show how virtual economies can reflect key aspects of consumer psychology, especially within how consumer behaviour changes near events.

2. Methodology

2.1 Research Aim and Hypotheses

The overall aim of this study is to examine how consumer economic behavior changes in response to a time-limited event within a virtual economy. Specifically, the research investigates how players alter their spending, saving, and investment decisions, with close attention to the variables of average time played, coins spent, coins earned, net gain/loss, and choice of spending avenue (Bazaar, Auction House, NPC shops, and event-specific items). The study also aims to determine whether these behavioral patterns mirror those observed in real-world economies during seasonal cycles.
To achieve this aim, the following objectives were established:

- Measure changes in average daily playtime across four distinct phases (pre-event, immediate pre-event, event, post-event).
- Track coins spent by each participant, disaggregated into Bazaar, Auction House, NPC transactions, and event-specific items.
- Track coins earned from active and passive income sources, including flipping, minions, and sales.
- Calculate net gain or loss during each phase to evaluate economic outcomes.
- Compare spending vs. reinvestment decisions to assess whether players prioritize immediate consumption or long-term income growth.
- Identify whether behavioral patterns align with established economic theories such as prospect theory, rational choice, bounded rationality, and sunk cost fallacy.

Based on these objectives, the study hypothesizes that both playtime and spending increase during the pre-event period, reflecting preparation and speculative activity. After the event, outcomes become more varied: some players reduce activity due to cooldown or exhaustion, while others sustain engagement to recover losses or seize lingering opportunities. This mirrors real-world consumer cycles, where activity intensifies before seasonal events and then either stabilizes or declines.

2.2 Research Design

The context for this research is the online game Hypixel Skyblock, which has a large and active in-game economy. The study centers on the "Season of Jerry," a recurring event in the game that adds limited-time items and special features. This event was chosen because it provides a clear stimulus to the in-game economy, similar to holiday sales in real life. The research took place from December 1 to December 25, 2024, with close attention paid to the period of the event, which ran from December 12 to 20. To capture changes over time, the data was divided into four phases: the pre-event phase from

December 1 to 7, the immediate pre-event phase from December 8 to 11, the event phase from December 12 to 20, and the post-event phase from December 21 to 25. Both the pre-event and immediate pre-event phases are referred to together as the overall pre-event period.

2.2 Sampling and Sample Characteristics

The sample for this study included six players. They were randomly chosen from a list of interested participants who responded to a Google Form shared on the Hypixel forums. Players volunteered to take part and agreed to provide daily updates about their in-game economic activity. Demographic data was collected through the form and included details such as age range, daily playtime, playstyle, and estimated in-game wealth tier. This information helped provide context to each player's behavior and ensured some diversity in the sample.

Table 1: Sample Demographics

S.No.	Name	Age	Gender	Employment Status	Country of Residence	Years of Experience with Hypixel Skyblock
1.	Player 1	18-24	Male	Student	Poland	1-2 Years
2.	Player 2	18-24	Male	Employed Full Time	Australia	2-4 Years
3.	Player 3	Under 18	Male	Student	Kazakhstan	2-4 Years
4.	Player 4	18-24	Male	Student	Russia	2-4 Years
5.	Player 5	Under 18	Male	Student	India	4 years+
6.	Player 6	Under 18	Female	Student	India	4 years+

2.4 Data Collection Procedure

Experiment-related data was collected through a daily Google Form submitted by each participant throughout the study period, as direct data access was not possible due to the technical setup of the game being studied. The form included fields for tracking economic activity such as:

- **Coins spent** (Bazaar, Auction House, NPCs, event-specific items).
- **Coins earned** (from sales, minions, and other sources).
- **Net gain or loss** (calculated from coins earned minus coins spent).
- **Average time played per day**.
- **Bank balance and wealth tier adjustments**.

This data collection began during the overall pre-event stage and continued through the event and post-event phases. During the event period, participants were also asked to note any purchase/sale activity involving event-specific items such as Jerry boxes or other limited-time goods. Responses from the Google Form were compiled daily into an Excel spreadsheet to organize and prepare the data for analysis. The goal was to create a detailed timeline of behavior across all four stages of the study. In cases where a participant failed to submit a form, the missing data was either clarified with them directly or filled in using reasonable estimates based on nearby entries.

2.5 Ethics and Informed Consent

Participants were fully informed about the purpose of the study before they began. The Google Form explained what the research involved, and submitting it was treated as giving informed consent. Participation was entirely voluntary, and players could leave the study at any time. To protect privacy, no real names or identifying personal details were collected. In-game usernames were either removed or replaced with labels. All information was kept secure and used only for the purposes of this research.

3. Results and Discussion

3.1 Individual Player Behaviour Assessment

Player 1, a Polish student aged 18–24, logged 26.5 hours of gameplay over the 25-day period. He spent 184.3 million coins pre-event (earning 227.3M, net +42.9M), only 36.5 million during the event (earning 22.2M, net -14.3M), and 27.8 million post-event (earning 52.8M, net +25M). He did not engage in bazaar/ah flipping and relied primarily on active gameplay. His bank balance of 1.8 million and lower coin holdings further reflect this labour-based strategy.

Table 2: Quantitative Summary for Player 1

Phase	Average Time Played (in hours)	Coins Spent (m)	Coins Earned (m)	Net Gain/Loss (m)
Pre-Event	2.62	48.00	52.30	+4.30
Immediate Pre-Event	3.00	78.89	168.07	+89.18
Event	3.00	33.56	10.82	-22.74
Post-Event	2.70	2.30	21.89	+19.59

Player 1's behaviour aligns with the direct input-output strategy. He maximised return through steady, active methods. His approach mirrors real-world fixed-income earners who engage in predictable, low-volatility activity (Tsai & Wu, 2011). Player 2, a full-time employed player from Australia, aged 18–24, exhibited dramatic financial swings. During the pre-event stage, he spent 345.8 million coins and earned 402.5 million (+56.7M net). In the event stage, he spent 318.45 million and earned 286.1 million (-32.3M net), and post-event, spent 784.4 million while earning only 699.6 million, resulting in a net loss of 84.8 million.

Table 3: Quantitative Summary for Player 2

Phase	Average Time Played (in hours)	Coins Spent (m)	Coins Earned (m)	Net Gain/Loss (m)
Pre-Event	2.00	315.80	339.50	+24.70
Immediate Pre-Event	2.25	30	62.52	32.52
Event	3.00	318.45	286.10	-32.30
Post-Event	0.25	784.40	699.60	-84.80

Player 2 executed high-volume trades and major post-event expenditures, on upgrades and non-recoupable items. His behaviour is marked by consumption-driven economics, with similarities to post-holiday spending surges or liquidity excess (Ahmed et al., 2018). Player 3, a student under the age of 18 from Kazakhstan, was one of the most aggressive early investors. During the pre-event stage (Dec 1–11), Player 3 spent 371.57 million coins and earned 458.32 million, logging a net gain of 86.75 million. This was with 12.5 hours of total gameplay. However, during the event stage, despite a reduction in spending to 79.7 million, the player's earnings fell drastically to 28 million, resulting in a significant net loss of 51.66 million. Post-event activity was minimal, with no recorded spending and a modest gain of 1 million coins.

Table 4: Quantitative Summary for Player 3

Phase	Average Time Played (in hours)	Coins Spent (m)	Coins Earned (m)	Net Gain/Loss (m)
Pre-Event	2.00	356.84	282.75	-74.08
Immediate Pre-Event	2.25	13.00	23.85	+10.85
Event	2.25	65.00	17.06	-47.94
Post-Event	0.27	0.00	1.00	+1.00

Player 3 demonstrates high initial risk appetite, speculative investment, and relatively low post-event activity. Despite access to economic tracking tools, Player 3 did not engage in Bazaar flipping. Player 4, a male student aged 18–24 from Russia, presented a limited dataset concentrated in the pre-event period. During this stage, he spent 45.92 million coins and earned 88.09 million, producing a net gain of 42.17 million over a total of 11 hours. The primary source of earnings was speculative trading in "Stock of Stonks."

Table 5: Quantitative Summary for Player 4

Phase	Average Time Played (in hours)	Coins Spent (m)	Coins Earned (m)	Net Gain/Loss (m)
Pre-Event	1.88	8.00	18.07	+10.07
Immediate Pre-Event	1.50	14.36	11.10	-3.26
Event	2.00	329.64	148.40	-181.24

Player 4's behaviour implies a high degree of market literacy and selectivity. His earnings per hour and coin efficiency rank are among the highest, indicating a deliberate and short-term opportunistic approach, like real world flash trading or event-driven investment (Fry & Serbera, 2017). Player 5, a male student under 18 from India, demonstrated one of the most balanced and effective strategies across all three stages. During the pre-event stage, he spent 98.7 million and earned 173.4 million coins (+74.7M net). During the event, he spent 87.5 million and earned 144.6 million (+57.1M net), and post-event, spent 49 million while earning 76.2 million (+27.2M net). His session length and time investment were moderate, and he played exclusively on a solo profile, relying on passive methods.

Table 6: Quantitative Summary for Player 5

Phase	Average Time Played (in hours)	Coins Spent (m)	Coins Earned (m)	Net Gain/Loss (m)
Pre-Event	3.00	21.50	47.20	+25.7.70
Immediate Pre-Event	3.00	35.00	36.00	+1.00
Event	2.70	61.50	137.40	+75.90
Post-Event	2.00	58.70	79.40	20.70

Player 5's profile suggests a risk-averse but active investor in new items, mostly soulflow, exhibiting traits aligned with resource optimisation and consistent reinvestment. Player 6, a female Indian student under 18, displayed the most consistent and profitable trajectory. With limited session time (<1 hour), she spent 85.7 million coins pre-event (earning 126.8M, +41.1M net), 69.3 million during the event (earning 145.2M, +75.9M net), and 34 million post-event (earning 92M, +58M net). She relied heavily on passive sources, avoided flipping, and played solo.

Table 7: Quantitative Summary for Player 6

Phase	Average Time Played (in hours)	Coins Spent (m)	Coins Earned (m)	Net Gain/Loss (m)
Pre-Event	4.67	48.90	74.40	+25.50
Immediate Pre-Event	3.17	36.00	52.40	+16.40
Event	2.90	69.20	145.20	+76.00
Post-Event	3.90	33.40	92.00	+58.60

3.2 Quantitative Comparison of all Players

Looking at all the players together, some clear patterns appear in how they behaved around the event. Most players made the highest gains during or just after the event. This shows that players were trying to earn more during busy periods when item demand was high. However, the ones who earned

consistently well, like Player 6 and Player 5, were the ones who used passive or balanced strategies. These players made smart decisions across all stages and did not rely too much on short-term spending. The biggest losses were usually seen in players who spent a lot during the event. Players like Player 4 and Player 2 took big risks by investing heavily. While this sometimes worked, it often led to large losses. This suggests that spending more during the event did not always lead to better results, especially if it was not planned carefully. One important insight is that playing for more hours did not always mean better results. Players like Player 6 and Player 1 used their time well by setting up steady income methods. This gave them better returns per hour than those who just played more without a clear strategy. Finally, the most successful players were those who planned their actions, spread out their efforts across all phases, and reinvested wisely. These habits led to strong and steady gains, instead of short-term spikes or crashes.

These patterns are similar to real-life economic behaviour. People who invest steadily, avoid risky spending during market highs, and reinvest their earnings often see better long-term results. On the other hand, people who rush to spend or invest during peak periods, hoping to make fast gains, often face losses (Clark & Monk, 2019; Benartzi and Thaler, 1995). The players in this study acted like real investors, consumers, or workers. Some followed steady paths, while others took high risks. The outcomes show how basic financial habits like planning, patience, and balance can make a big difference — both in-game and in the real world.

Table 8: Combined Quantitative Summary Across All Stages

Phase	Average Time Played (in hours)	Coins Spent (m)	Coins Earned (m)	Net Gain/Loss (m)
Pre-Event	2.42	771.64	787.02	+16.53
Immediate Pre-Event	2.50	206.25	337.54	+131.29
Event	2.61	869.65	737.18	-132.42
Post-Event	1.65	929.06	973.15	+44.09

3.1 Behavioural Patterns and Comparative Habits

3.1.1 Speculative vs Strategic Pricing

During the lead-up to a major in-game event, player behavior reflected two distinct pricing strategies, speculative and strategic, each with observable economic implications. As the special event approached, some players responded to anticipated market shifts by engaging in speculative pricing. This refers to assigning value based on expected future demand rather than present utility, commonly observed in real-world markets such as cryptocurrency or real estate bubbles, where prices surge based on future expectations rather than intrinsic worth (Harrison & Kreps, 1978). In the experiment, this was evident in the sharp rise in pre-event purchases of limited or meta-sensitive items, suggesting that players expected significant returns during the event window. The strategy mirrored real-life investor behaviour before known market triggers, such as product launches or regulation changes (Raut et al., 2018). However, the data revealed that this approach was often accompanied by volatility. Several players who adopted speculative strategies saw losses or minimal net gains, particularly when post-event market conditions failed to meet their expectations.

In contrast, another group of players displayed behaviour more aligned with strategic pricing. Defined as setting or adjusting prices based on stable supply-demand knowledge and long-term utility rather than short-term speculation, strategic pricing is closely related to principles of cost-leadership and efficient resource allocation (Cannon & Morgan, 1990). Players who used this approach tended to purchase consistent-use consumables or raw materials during stable price periods, choosing items that held predictable value across all phases of the event cycle. This mirrors real-world retail or institutional

investment behaviour, where resources are deployed conservatively based on historical patterns and fundamental value. In the study, players employing this model maintained steadier profits across all four stages and experienced fewer losses. The correlation between long-term value calculation and consistent profitability supports the idea that planned economic behaviour offers more resilience than speculative bursts, especially in event-driven economies where demand spikes are temporary and often unpredictable.

Taken together, these findings suggest that event-based environments, much like real economies, incentivize both risk-taking and caution but with outcomes that depend greatly on timing, information access, and behavioural discipline. Strategic pricing yielded more stable returns over time, whereas speculative pricing created opportunity for gains but carried a significantly higher risk of loss, particularly when collective expectations did not materialize.

3.1.2 Active vs. Passive Income Reliance

In this experiment, players showed two clear ways of earning money in the game: through active income or passive income. These two models help us understand how people behave in response to events, especially when the goal is to either make fast profits or build steady earnings. Active income is when players earn money by directly performing tasks in the game. This includes things like mining, fighting mobs, or trading manually. It requires them to be online and involved. In real life, this is similar to wage jobs or freelance work, where people are paid for the time or effort they put in. In the data, active income was more common before the event began. Many players spent long hours trying to build up their coin balance so they could afford event-related spending.

On the other hand, passive income is when players set up systems that keep earning money even when they are offline. This includes using minions, collecting bank interest, or setting up auction listings that make a profit over time. In the real world, this is like earning money through investments or renting out property, where the income continues without constant work (Kochar et al., 2023). Players who used passive income methods were often the ones who earned steady profits across all four phases of the event. They spent less time playing but earned more in the long run, especially when they combined passive systems with smart pricing decisions.

Overall, the experiment shows that players who relied on passive income were less affected by short-term changes in the market. They had more stable gains and did not have to take big risks. Players who used active income could earn a lot quickly, but their results depended heavily on how much time they played and whether they made the right moves during key moments. This reflects a common pattern seen in real-world economies, where people who depend only on their labour can be more affected by sudden changes, while those with assets or automated income are better protected. Some players used both methods at once, showing a mix of effort and planning. This combination gave them flexibility and reduced their risk (Giupponi & Machin, 2024).

3.1.3 Consumption vs. Reinvestment

Throughout the experiment, players showed different ways of using their earnings, especially during and after the event. These spending choices reveal two main types of behaviour: consumption-oriented and reinvestment-oriented. Consumption-oriented behaviour is when players spend their money on things that give immediate enjoyment, convenience, or status. This includes items like pet skins, cosmetics, special upgrades, or other features that improve how the game feels without generating more income. In real life, this is similar to spending on luxury goods, entertainment, or shopping after receiving a bonus. Players who showed this pattern often spent large amounts right after earning a lot, especially

during the post-event phase when limited-time offers were available. This led to net losses for some players, as the money spent did not help them earn more later.

On the other hand, reinvestment-oriented behaviour is when players use their earnings to improve how they make money in the future. This might mean upgrading minions, buying better farming tools, or investing in reliable income sources like consistent auction flipping. In economic terms, this mirrors business reinvestment or putting profits back into assets that grow in value over time. In the game, this behaviour was most common among players who saw steady growth across multiple phases. These players made fewer flashy purchases and instead focused on building systems that gave them long-term returns.

The results showed that players who reinvested their coins were more likely to perform well overall. They had more stable earnings and were less affected by the ups and downs of the event. Players who focused on consumption saw bigger swings, especially when spending increased without a plan for recovery. A few players, like Player 3, started with reinvestment but shifted toward consumption during the event. This shift often led to poorer performance later, showing how short-term spending can break long-term growth. These behaviours reflect real-world financial patterns. For example, Player 2's losses after the event are similar to how people often overspend during holidays and end up in debt. Player 6 and Player 5 acted more like careful investors who build strong portfolios and grow steadily. Player 1 used consistent tools and low-risk strategies, which resemble reliable wage earners. Player 4 focused on short-term opportunities with high reward potential, similar to real-world market traders. Overall, the way players spend their coins gives insight into how people react to temporary excitement or pressure and whether they choose quick rewards or long-term planning.

3.2 Theoretical Applications

3.2.1 Prospect Theory

One of the most visible psychological patterns in the data can be explained through prospect theory, a concept from behavioural economics that helps us understand how people make decisions under uncertainty. Prospect theory suggests that people do not always make rational financial choices. Instead, they often react more strongly to potential losses than to gains of the same size (Kahneman & Tversky, 1979). They also tend to judge outcomes based on changes from their starting point, rather than looking at the absolute final result. This means that someone who has earned a lot might still feel disappointed if they lose part of it later, even if they are still better off overall.

In the experiment, this theory helps explain why some players made risky or irrational decisions, especially during the event phase. For example, players like Player 3 and Player 2 made strong gains before the event, but instead of securing those profits, they continued to spend or invest aggressively. This behaviour suggests that they were trying to avoid the feeling of losing out on even bigger gains. When their strategies failed, they experienced significant losses, yet kept spending. Their choices seem to reflect what prospect theory describes as "loss aversion," where the fear of missing out or taking a loss leads to poor judgement. We also saw signs of "reference point bias." Players who had already gained a lot compared their later performance to that high point, not to their original starting balance. So even small setbacks felt like major losses, pushing them toward riskier decisions in the hope of bouncing back. This pattern was not as common among players with steady, long-term strategies, who seemed less affected by short-term swings. Overall, the experiment supports the idea that emotional responses to gains and losses can have a strong impact on economic behaviour, especially during special events when pressure and excitement are higher than usual.

3.2.2 Rational Choice Theory

Another way to understand how players behaved is through rational choice theory, which is a core idea in economics. This theory assumes that individuals make decisions by carefully weighing the costs and benefits of each option and then choosing the one that brings them the most personal benefit or utility (Kahneman & Tversky, 1979). In theory, these decisions are based on logic, full awareness of consequences, and a desire to maximize outcomes over time. In the context of the experiment, some players showed clear signs of following this model. Players like Player 6 and Player 5 planned their actions across all four phases, often reinvesting their earnings into systems that increased their future income. They did not chase sudden gains or react strongly to temporary market changes. Instead, they seemed to calculate their moves based on what would give them the best and most stable return. Their strategies involved low risk, consistent effort, and long-term thinking, all of which reflect rational, goal-oriented behaviour. These players also showed flexibility. They adjusted to each phase of the event but did not overreact. This shows that they were not only trying to make the most profitable decision in the moment but were also thinking about how each choice would impact their future position. In this way, the experiment supports rational choice theory by showing that when players have enough information and self-control, they are capable of acting in ways that align closely with what the theory predicts.

3.2.3 Bounded Rationality

While some players showed signs of calculated, long-term planning, not everyone made decisions that followed the ideal of full rationality. This is where bounded rationality becomes useful as a framework. Bounded rationality is a theory that recognizes people often make decisions with limited information, limited time, and limited mental capacity. Rather than always choosing the best possible option, people tend to settle for what seems “good enough” in the moment (Solow & Simon, 1958). They use shortcuts, simple rules, or trial and error instead of running full cost-benefit calculations. In the experiment, bounded rationality helps explain the behaviour of players like Player 1. His decisions seemed cautious and consistent, but not deeply optimized. He relied on straightforward methods like steady grinding, low-risk investments, and avoiding complex or speculative tactics. This pattern shows someone who likely chose familiar, easy-to-manage strategies instead of trying to analyze every market change. His performance was solid and stable, but not the highest among the group, which fits the idea that players working within limits often prioritize safety and familiarity over efficiency. The concept also helps explain why many players avoided adjusting their approach even when the market changed during the event. They may not have had the time, tools, or understanding to react fully, so they stuck to the habits they already knew. Rather than chasing perfect outcomes, they aimed for outcomes they could trust and control. The experiment shows that even in a digital economy, people’s decisions are often shaped by the limits of time, energy, and information, just like in real-world markets.

3.2.4 Sunk Cost Fallacy

Another pattern seen in the data can be explained by the sunk cost fallacy. This fallacy happens when someone continues to invest time, money, or effort into something just because they have already put a lot into it, even if continuing is not the best choice. In other words, instead of cutting their losses, they keep going to avoid feeling like their earlier effort was wasted (Arkes & Blumer, 1985). This is a common mistake in both everyday life and financial decisions, where people hold on to bad investments or failing projects for too long. In the game, this behaviour was most visible in players like Player 3. He spent heavily before the event and saw strong early gains. However, instead of adjusting his approach when returns started to drop, he continued spending during the event even as profits fell. It appears that the large number of coins and time already invested made it harder for him to pull back. This resulted in a significant loss that might have been avoided with a more flexible mindset. His decision-making reflects

the sunk cost fallacy: a reluctance to shift strategies after committing resources, even when conditions clearly changed. This pattern shows how emotional attachment to past effort can affect economic behaviour. Rather than responding logically to new information, players may stay locked into earlier plans. The experiment demonstrates that in high-pressure, event-driven situations, players can fall into this trap just like people do in the real world. Recognizing when to stop or shift direction is difficult, especially when effort and expectations are high, but failing to do so often leads to further loss.

Conclusion

This study set out to examine how consumer economic behavior changes in response to an event, using the "Season of Jerry" in Hypixel Skyblock as a case study. The primary goal was to explore how spending, saving, and investment decisions shift across different phases of an event, and whether virtual economies reflect real-world financial behavior. The findings reveal that player behavior in a digital setting shares strong parallels with economic patterns seen in real life. Players who planned ahead, reinvested earnings, and balanced risk tended to perform better across all stages. In contrast, those who relied on speculative spending during the event often saw sharp losses. Passive income strategies and long-term planning were consistently linked to more stable and profitable outcomes, while high-risk, consumption-driven behavior led to volatility. Additionally, patterns such as loss aversion, sunk cost fallacy, and bounded rationality were clearly observed in player decisions.

These insights have broader implications beyond gaming. Educators, researchers, and economists can use this study to better understand how financial behavior develops in low-risk environments, making virtual economies a useful model for studying economic psychology. The findings could inform financial literacy programs, where game-based simulations help learners see the long-term benefits of reinvestment, budgeting, and delayed gratification. Developers of digital economies or metaverse platforms might also use these results to predict user behavior and design systems that promote economic stability or sustainability. Furthermore, behavioral researchers may find value in the way digital platforms naturally demonstrate theoretical principles like rational choice theory and prospect theory in action.

However, the study has a few limitations. The small sample size of six participants limits how widely the results can be generalized. The study relied on self-reported daily data which can introduce unreliability and inaccuracy. Future studies may access the Hypixel API directly to view player data and reduce this inaccuracy. The setting, which was a game with its own unique systems and incentives, does not perfectly mirror real-world financial constraints. Future research could expand this work by including a larger and more diverse group of players across multiple virtual economies or games. Further studies might also track behavior over a longer period or during multiple events to better capture long-term trends. Despite these constraints, the study demonstrates that virtual economies can serve as valuable spaces for understanding human economic behavior in ways that are interactive, measurable, and deeply reflective of real-world tendencies.

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