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Key Takeaways

- Incentives can drive short-term spikes in usage; however, consider tapering and strict vesting to sustain activity further.

- While the retroactive airdrop for Polynomial Vault V1 depositors was an excellent way to reward early adopters, it lacked longevity as the Vault program was ultimately [sunset](#). Additionally, the 450,000 OP initially allocated for liquidity mining incentives could not be used as planned. As recommended in our [Rubicon](#) analysis, such cases underscore the importance of swift deployment timelines following governance approvals.

- Incentives contributed to a 23x surge in trading volume but only doubled daily traders. This indicates engaged users are trading more, but user growth is slower. Longer time horizons may help expand adoption.

- Polynomial's innovative XP system redefined the structure of incentives by monitoring user activity, such as volume, limit orders, and PnL, to determine reward levels. Nevertheless, wash trading remains an issue plaguing trading incentive programs. While Polynomial did incorporate innovative elements like trading levels and competitions, more analysis is needed on optimizing programs, to limit exploitative behavior. Future programs should consider imposing trading limits or vesting periods for programs offering fee rebates.

Program Overview

- [Polynomial](#)

- Governance Fund Season/Cycle: [Phase 0 Cycle 1](#) - 900,000 OP

- Date(s) Funded: [July 19, 2022](#)

- Wallet Funded: [0x59672D112d680CE34C20fF1507197993CC0bA430](#)

Distribution

Polynomial integrates Synthetix's liquidity into a trading interface to offer accessible derivative trading for Optimism users. Polynomial Protocol was [funded](#) with 900,000 OP in [Governance Fund Phase 0 Cycle 1](#) for distribution across the following programs:

- [Retroactive Airdrop](#): 180,000 OP

- Airdrop for Vault V1 depositors.

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- Liquidity Mining: 450,000 OP

- Incentives for Vaults.

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- Grants: 128,580 OP

- [Building Blocks](#): 72,000 OP

- Incentives for Lyra Liquidity Providers.

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- [Frens of Polynomial](#): 69,420 OP

- Grants to core developers of Synthetix, Lyra, Perpetual Protocol, Kwenta, and Thales.

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The [retroactive airdrop for Earn Vault V1](#) users, [Frens of Polynomial](#), and [Building Blocks](#) were completed as proposed. However, Polynomial could not allocate the 450,000 OP liquidity mining incentives on Vaults, since the Vaults were [sunset](#) before distribution. As a result, these rewards were redistributed and used as trading incentives during [Synthetix's OP Rewards](#) and Polynomial Trading seasons. This pivot from incentivizing liquidity to trading activities proved impactful, given the proximity to the launch of [Polynomial Trade](#), which exceeded $2 billion in trading volume. The incentives were structured

innovatively via Polynomial's unique XP system, which tracked user activity like volume, limit orders, and Profit Net Loss (PnL) to determine reward levels. Thsed trader levels boosted rewards during the rewards programs and granted access to tiered trading competitions.

Daily Transactions

Polynomial experienced a significant spike in transactions following the launch of Polynomial Trade in late March of 2023 and also spiked during the beginning of Synthetix OP rewards. However, there was a decrease in transaction activity between the Synthetix OP rewards announcement and Polynomial's Trading Season announcement.

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Polynomial averaged 588 daily transactions during the incentives, accumulating 123k transactions during OP incentives. Despite doubling the number of transactions of the 30D before, they came at a slower pace as the average number of daily transactions for the 30D before incentives was 1,280, totaling 40k.

Daily Network Fees Generated

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The Polynomial incentive programs brought in a total of 28 ETH, averaging around 0.128 ETH in daily fees. The network fees generated by Polynomial are not as high as we've seen with other programs, such as Rubicon. However, it's worth noting that the Bedrock update occurred on June 06, 2023, which significantly reduced gas fees. It's estimated that this upgrade resulted in a 55% decrease in gas fees for perpetual swaps. The incentive program generated an average of 0.227 ETH before the upgrade and 0.109 after.

Trading Season Analysis

On July 11, 2023, Synthetix launched its trading rewards program offering rebates on all fees paid on Synthetix Perps. As Polynomial is built on top of Synthetix, users who paid fees on Polynomial were eligible for Synthetix rewards. However, as Polynomial is not the only protocol built on top of Synthetix perps, it had to compete with Kwenta rewards simultaneously. With most rewards sourced from Synthetix at 300,000 OP/week and Kwenta matching with 30,000 OP/week, we find Kwenta to be a firm favorite regarding initial trading. However, things quickly changed when Polynomial announced its trading rewards and competitions on April 12, 2023. Interestingly, we see a unique approach to rewarding traders based on 'levels' utilizing Galxe NFTs and an XP model unlocking trading competitions and reward boosts for more prominent traders.

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With all programs incentivizing the same usage metrics, the major storyline remains the sheer amount of rewards traders could obtain by using either or both protocols. These combined rewards initiatives led to an increase in OP per fee spent, at times rebating users more OP (in $USD) than fees paid, raising concerns of wash trading.

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The issue with incentives that promote inorganic volume, such as those that promote an environment ripe for wash trading, is that they create an unsustainable growth vertical. Trading volume and protocol usage evaporate along with rewards (E.g. LooksRare). We believe that all reward programs should create a stream of growth for the ecosystem, and we would like to see the negative effects of reward programs promoting wash trading be more closely monitored and disincentivized when found. To begin analyzing the potential existence of inorganic trading, we first broke down the source of rewards on a weekly

basis during the Synthetix OP rewards program.

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After mapping out the distribution sources of OP by week, we analyzed the activity on various Synthetix trading platforms. As anticipated, Kwenta initially dominated. Before the launch of Polynomial's program, Kwenta accounted for an average of 31% of daily Synthetix Perp volume. However, we observed a significant shift in protocol usage following the program's introduction.

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Before the introduction of the Synthetix OP rewards program, Polynomial accounted for approximately 3% of the total trading volume in Synthetix Perp. Polynomial's share of Synthetix Perp trading volume dropped to 1.42% with the launch of Synthetix and Kwenta rewards. However, once Polynomial's trading rewards program began on July 11, 2023, the platform's share of Synthetix Perp trading volume shot up to an average of 31%.

Likewise, Polynomial's share of fees also rose significantly with the program's launch, reaching 86% of daily fees generated. However, despite this significant spike, Kwenta still generated $8M more fees than Polynomial ($9.5M).

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Although the usage spikes don't inherently point to wash trading, they signal a strong response by traders. Delving deeper, we analyzed the number of daily unique traders on Polynomial and compared it to the surge in trading volume. As a result, we found modest growth in daily users but extreme spikes in trading volume.

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While the volume spikes could be a byproduct of power traders, the platform's exponential growth in cumulative trading volume, which surpassed $3.8 billion, could also point to inorganic usage. To put this growth into perspective, Polynomial had accrued $63 thousand in cumulative trading fees at the beginning of the Synthetix trading reward period on April 19, 2023. By the end of the program, the protocol brought in over $1.8 million in trading fees, a 23X increase. Polynomial allocated approximately 270K OP for liquidity incentives, resulting in $6.67 in fees per OP spent.

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While the volume spikes may be a result of power traders, the combination of profitable rebates and the major usage spikes likely point towards inorganic usage. Only time will tell if this growth is sustainable, as the months following the conclusion of incentives will reveal the true effectiveness of maintaining usage levels. It's also worth noting that Polynomial currently retains 40% of the OP allocated for trading rewards (180K OP), and without Synthetix rewards, future programs may lose their appeal for wash traders.

Recommendations

- Wash trading remains an issue plaguing trading incentive programs. Although Polynomial introduces innovative components such as trading levels and competitions, further analysis is needed to optimize these programs and limit exploitative behavior. Future programs should consider imposing trading limits or vesting periods when offering fee

rebates.

- Projects offering grants as part of their OP distribution should incorporate a straightforward process for distributing grants, including detailed RFPs, a review process, and a distribution timeline, to distribute the OP earmarked for grants efficiently. Multiple programs have outstanding OP balances, which makes these programs potentially the least inefficient token distribution method. The Collective should consider a framework that requires recipients to detail their proposed grant programs in detail, with infrastructure and processes already in place to support such a program. Additionally, the Collective could consider clawing back OP that goes unused for grants after a certain period.

- Reward tapering mechanisms could promote retention better than fixed schedules.

- Continued user segmentation, cohort analysis, and an iterative approach to incentive programs will strengthen future efforts and, ultimately grow OP.

- We would be happy to assist the community with further integrating our learnings into best practice frameworks for future OP incentive programs to improve upon.

Closing Remarks

The OP incentives have proven highly effective in spurring rapid platform growth for Polynomial. When implementing programs like trading competitions, and fee rebates, it's essential to understand that volume sources must be closely scrutinized and programs refined to discourage exploitative behavior. Polynomial successfully filtered out malicious traders via trader levels, utilizing Galxe NFTs. We encourage more programs to think of creative ways to target real users similarly.

Observing the long-term sustainability of Polynomial's incentive programs will be interesting over the coming months. It's clear that with careful incentive targeting and thoughtful design, programs like Polynomial's can catalyze the organic growth of emerging DeFi protocols.

Sources

- [OP Analytics Repo](#)

- [Incentive Program Performance Summary - Dune @oplabspbc](#)

- [@optimismfnd / Optimism Mainnet Project Deep-Dive

(OP Mainnet)](https://dune.com/optimismfnd/optimism-project-deep-dive)

- [Incentive Program Performance Summary - Dune @oplabspbc](#)

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(OP Mainnet)](https://dune.com/optimismfnd/optimism-project-deep-dive)

- Polynomial

- [Polynomial Trade Dune Dashboard](#)

- [Polynomial Trade Dune Dashboard](#)

- Other Resources

- [Case Study: Polynomial (Synthetix Blog)](#)

- [Polynomial Mirror](#)

- [Polynomial Earn Docs](#)

- [Polynomial Trading Season Dune Dashboard](#)

- [Polynomial - [Phase 0] OP Grant Update](#)

- [Case Study: Polynomial (Synthetix Blog)](#)

- [Polynomial Mirror](#)

- [Polynomial Earn Docs](#)

- [Polynomial Trading Season Dune Dashboard](#)

- [Polynomial - [Phase 0] OP Grant Update](#)