

STAR ATLAS

State of the Economy

ATMTA, Inc.

Department of Economics

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Executive Summary

This quarter's narrative was shaped by the new SAGE Labs economy, with additional influence stemming from the escalating ATLAS/USDC pairing. The broader uptrend in the cryptocurrency market intensified interest in the Star Atlas ecosystem. It also triggered a notable surge in wealth across various census groups, fostering an overall uptick in Star Atlas engagement.

The escalating demand for the ATLAS currency introduced a ripple effect, resulting in dynamic gameplay preferences exhibited by Faction Fleet (SCORE) and Star Atlas Golden Era (SAGE) participants. This shift in player behavior highlighted the volatility in economic choices within the Star Atlas universe during the quarter.

The transition from Faction Fleet to SAGE Labs illustrated the divide between the active and passive player bases within the Star Atlas community. At the faction level, the strategic allocation of VWAP reflected distinct choices, with MUD and ONI channeling their resources predominantly into only one of the programs. At the same time, USTUR exhibited a more balanced distribution across both.

The negative correlation between SAGE Labs and Faction Fleet participation suggested that players perceived these programs as substitutes, further shaping the evolving landscape. Surpluses in production among factions resulted in comprehensible behavioral patterns, offering a unique lens into the intricate economic interactions within the Star Atlas metaverse.

Key Highlights:

- Daily SCORE participation shifted above the mean trend for the first time since the start of its decline in 2021.
- The ONI and USTUR factions waited for strong ATLAS/USDC price action to re-enter SCORE, while the MUD faction consistently re-entered over time.
- Aggregate census wealth grew by 302%.
- SAGE Labs supported 1,550 daily active wallets on average throughout the quarter.
- Surpluses of Golden Tickets produced by USTUR and ONI found a market in the MUD faction, leading to a substantial wealth exchange.
- Food, fuel, ammunition, toolkits, and survey data units showed incredible strength in their USDC valuation throughout the quarter.

We begin by looking at our legacy program, Faction Fleet, to get an idea of how players reacted to the changes to the broader economy. Faction-specific details provide additional insight into the labor decisions of different populations, which is carried forward throughout the report.

Faction Fleet Engagement

Transitions were evident throughout the quarter in and out of the Faction Fleet program (SCORE) due to Star Atlas Golden Era (SAGE) and broader market conditions. Areas highlighted in gray provide a historical reference to the pre-period decline leading up to the shift in trend.¹ MUD and ONI surpassed USTUR in active faction fleet wallets by approximately 40% on average, equivalent to the faction claims program.

Figure 1: Daily Active Wallets in Faction Fleet by Faction

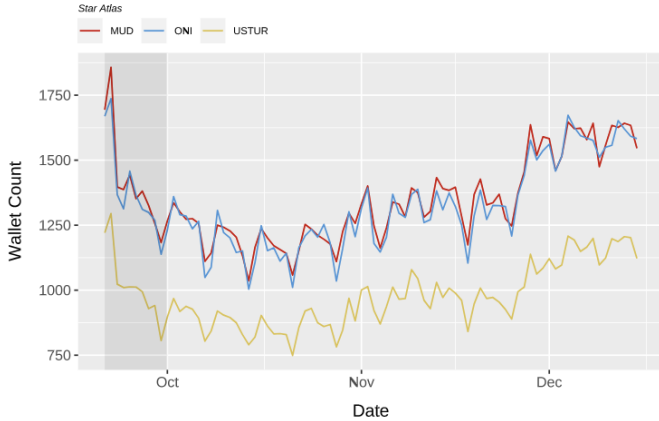
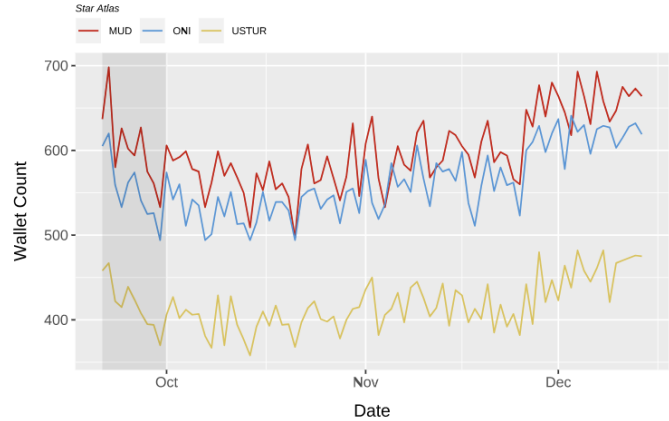


Figure 2: Daily Active Wallets in Faction Claims by Faction



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The shift in participation in Figure 1 and Figure 2 was attributed to heightened demand for assets and a strategic effort to optimize yield across various fleets. Notably, this quarter marks a significant milestone as the Faction Fleet program saw significant growth, departing from the declining participation observed since its peak in 2021. The renewed interest coincides with the increased demand for ATLAS, which we will later explore.

Figure 3: Active VWAP in Faction Fleet [Mil of VWAP]

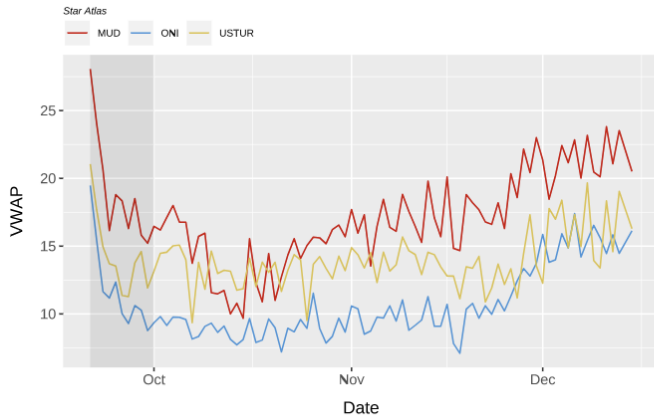
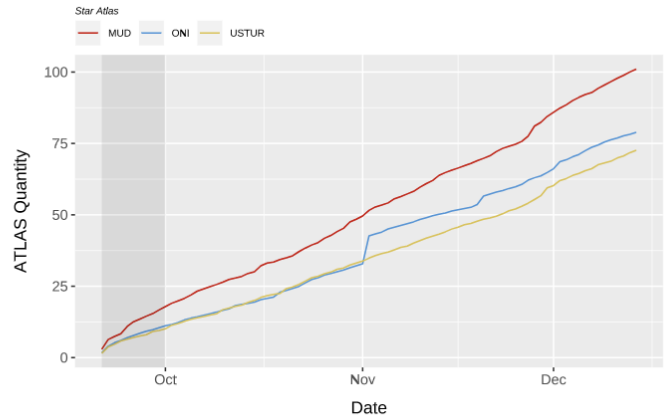


Figure 4: ATLAS Claimed in Faction Fleet by Faction [Mil of ATLAS]



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During the quarter, the MUD faction retained its position as the wealthiest among the three factions in terms of Volume-Weighted Average Price (VWAP) committed to the Faction Fleet program and made a substantial claim of over 80 million ATLAS, 35% more than ONI and USTUR on average.² This dual achievement underscores the MUD faction's financial strength and resource dominance, highlighting its significant contributions to and influence within the Star Atlas ecosystem. ONI claimed the most ATLAS on a single day, totaling almost 10 million.

¹ 2023-09-21 to 2023-10-01

² Between 2023-10-01 to 2023-12-15

Gameplay Transition

The increase in ATLAS/USDC hindered the transition from Faction Fleet (SCORE) to SAGE Labs over the period.³ This rise in the exchange rate prompted an influx of approximately 188,734 VWAP in ships daily on average into the SCORE labor force, coinciding with the strengthening of the currency.

Figure 5: Active VWAP Allocation by MUD Faction Participation [Mil of VWAP]

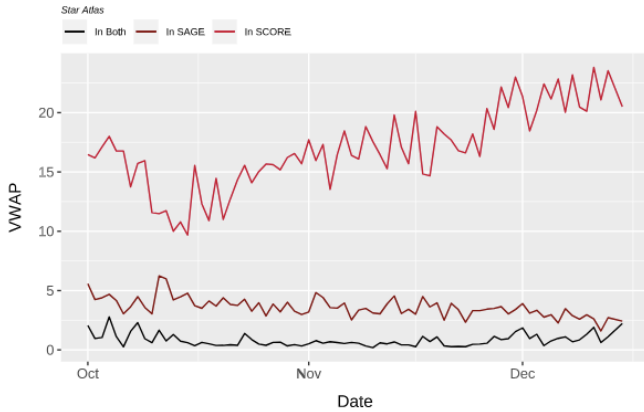
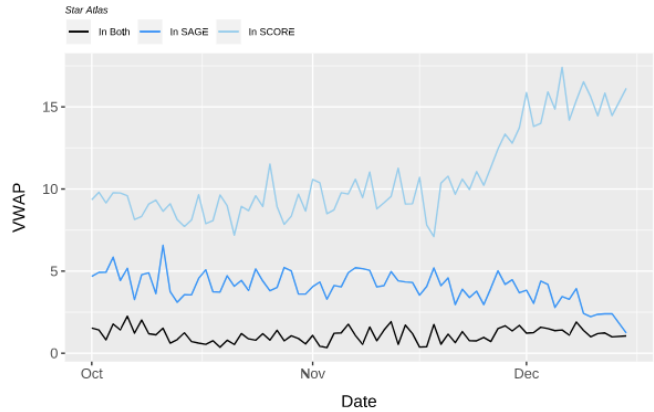


Figure 6: Active VWAP Allocation by ONI Faction Participation [Mil of VWAP]



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The MUD and ONI Factions demonstrated a binary employment strategy, evident in players' relatively subdued active VWAP levels in both programs. This distinct division was composed of participants with lower-class ships aiming to optimize their income across both programs.⁴ The observed trend indicates the MUD faction's gradual reintroduction of VWAP into SCORE. In contrast, ONI was more cautious, waiting for significant ATLAS/USDC price movements before re-entry.

Figure 7: Active VWAP Allocation by USTUR Faction Participation [Mil of VWAP]

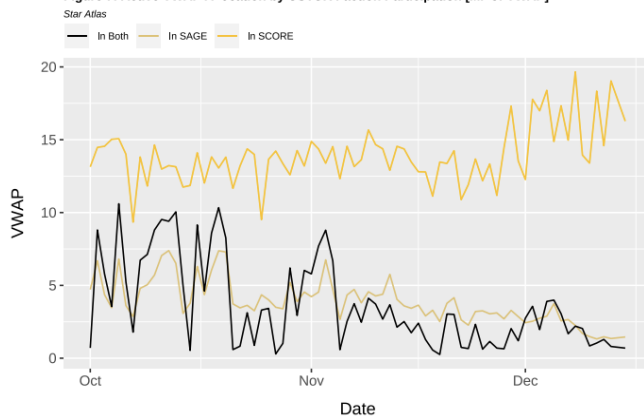
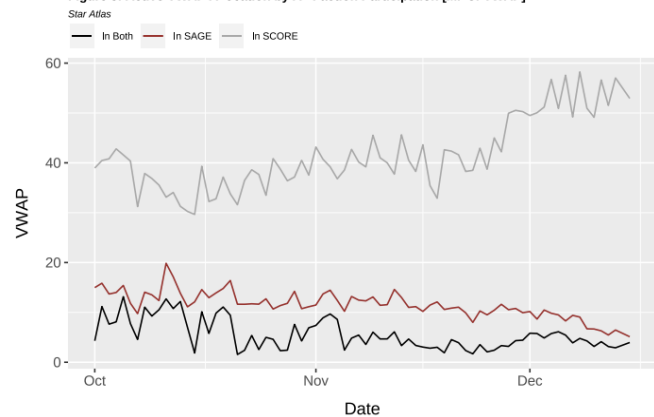


Figure 8: Active VWAP Allocation by All Faction Participation [Mil of VWAP]



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On the other hand, USTUR participants adopted a different strategy by allocating their labor more evenly between SCORE and SAGE at the wallet level. Like ONI, they strategically awaited favorable price movements before redeploying VWAP into SCORE. Throughout the quarter, SCORE remained the most actively engaged program regarding active VWAP.

The strategic decisions of factions reveal risk and reward considerations. Variations in entry timing and program allocation show how factions optimize their labor force participation to maximize income.

³ ATLAS/USDC jumped in price from 0.0015 to 0.0061.

⁴ Lower class ships include xx-small, x-small, and small classes of ships.

The Star Atlas Census

The latest Star Atlas census marks a pivotal moment, encompassing the transformative impact of SAGE labs. Wallets actively engaged in SAGE activities fulfill the employed criteria, while those possessing the newly introduced R20 resources are categorized under the NFT Owner criteria. This comprehensive approach provides a nuanced understanding of the Star Atlas community, capturing the dynamic intersections of participation and ownership within the evolving ecosystem.

Table 1: Star Atlas Census (12-15-2023)

Category	Currency	NFT Owner	Voter	Employed	Freq	Frac	Wealth	WShare
Nonresident Currency	Y				95021	55.0	46.66	34.78
Nonresident NFT		Y			11307	6.5	2.22	1.65
Nonresident Locked POLIS	Y	Y	Y		30584	17.7	14.26	10.63
Residents	Y			Y	2735	1.6	17.50	13.04
Citizens	Y	Y	Y	Y	4352	2.5	18.81	14.02
Total					18188	10.5	11.54	8.60
	Y	Y		Y	8966	5.2	8.39	6.26
	Y	Y	Y	Y	1547	0.9	14.77	11.01
					172700	100.0	134.15	100.00

¹ Exclude wallets with <100 R4 and/or R20 holdings

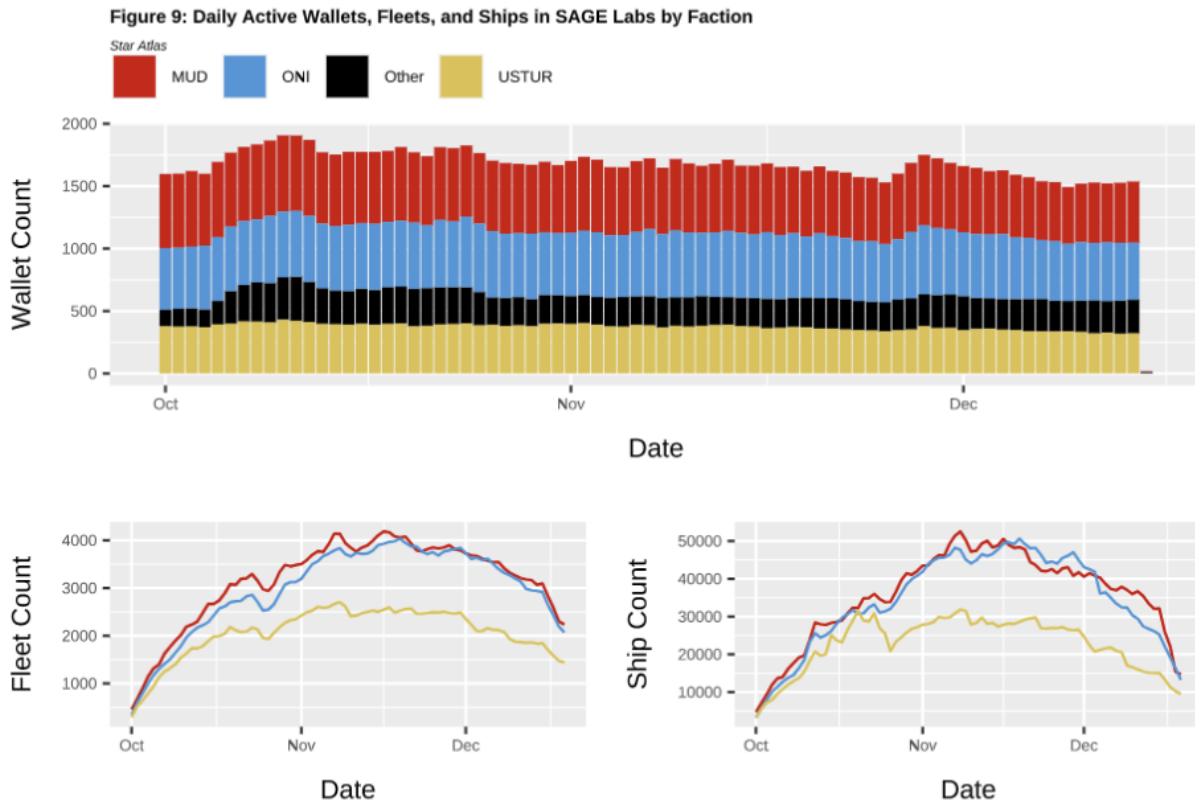
Significant wealth surges characterized the quarter, with notable impacts on various census groups within the Star Atlas ecosystem. Nonresident currency holders experienced a 544% increase in wealth compared to the preceding quarter, primarily attributed to the rise in ATLAS/USDC. Nonresident NFT holders also reaped the benefits, witnessing 17,029 new participants and increased wealth, driven by a 30% increase in USDC ship prices and a comparable increase in commodity prices.

Moreover, nonresident-locked POLIS demonstrated growth as players sought enhanced yield opportunities through the POLIS locker program. As a result, their wealth and wealth share increased significantly.

Conversely, resident and citizen numbers declined slightly throughout the quarter but maintained and increased their wealth. The Star Atlas census recorded a noteworthy addition of 5,685 new participants, contributing to a remarkable 302% growth in aggregate wealth.

Star Atlas Golden Era

The first full quarter of SAGE Labs has ended, bringing large fluctuations in participation as player preferences changed over time. Total active wallets in SAGE Labs averaged 1,550 daily, split between MUD, ONI, USTUR, and non-faction participants. This success translated into a thriving production economy and diverse labor specialization comprising 6,292 unique participating wallets over the quarter.⁵



The decline in fleets and ships within SAGE Labs coincided with a strategic reallocation of assets by players in response to shifting demand dynamics. This trend reversal in both charts aligns with the surge in ATLAS/USD and the increase in Faction Fleet participation. The pronounced increase in value prompted a resurgence of smaller class ships into the Faction Fleet program, and yield estimates increased. Players navigate a binary landscape, actively participating in the Faction Fleet Program and the SAGE Labs program as they adapt to the evolving gameplay conditions.

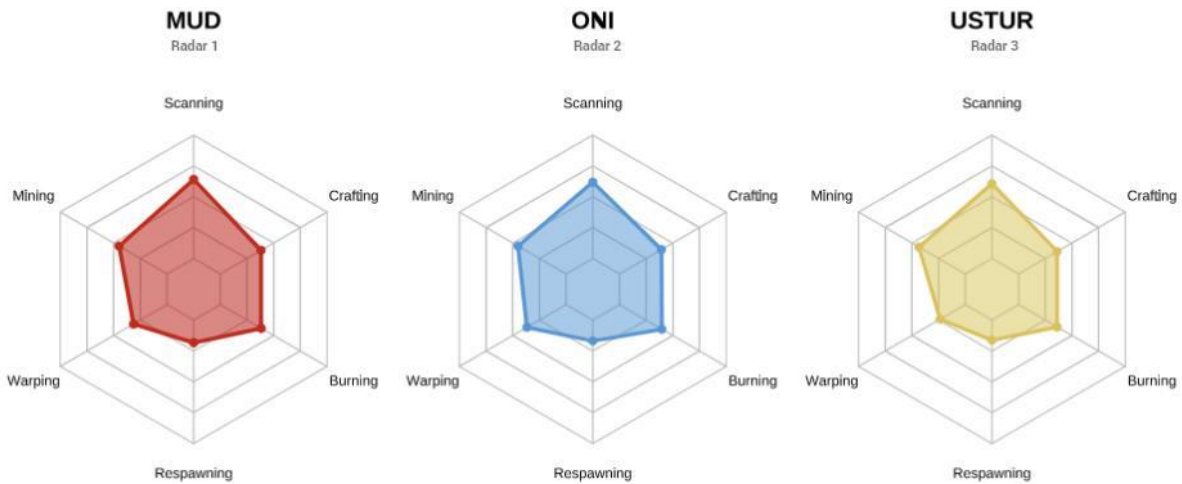
Table 2: Ship Composition Percentage in SAGE Labs

Faction	X-Small	XX-Small	Small	Medium	Large	Capital	Commander
MUD	45	35	34	37	21	25	35
ONI	30	38	46	38	32	39	41
USTUR	21	19	19	16	46	35	24

The fleet composition in SAGE Labs shows the preferences in specific ship classes between factions. The ONI faction had the largest ship allocation across most classes compared to MUD and USTUR. However, MUD significantly outperformed in the xx-small class, supporting their ship quantity

⁵ Participating wallets are active wallets that have performed an in-game action and are separate from all-time SAGE Labs connections.

dominance throughout the quarter. These class preferences translated into labor preferences exhibited by the factions throughout the quarter.



Radar charts 1 through 3 depict the relative labor action counts for each faction, normalized against the action count of the median player.⁶ Notably, the labor force strategies of the MUD and ONI factions are comparable in their performance relative to the median player, with ONI exhibiting a slight advantage in warping capabilities. Conversely, the USTUR faction exhibits underperformance across all categories except mining. When looking at their respawning behavior, the MUD faction found themselves stranded in deep space more than USTUR and ONI throughout the quarter.

The outcome of these actions produced a thriving new production economy for the new commodities introduced in SAGE Labs. The production-to-consumption ratio compares how much was produced compared to how much was consumed per day. A ratio greater than one suggests that production exceeds consumption, while less than one indicates that consumption is higher than production on a given day.

Figure 10: Production Consumption Ratio of Raw Resources by Faction

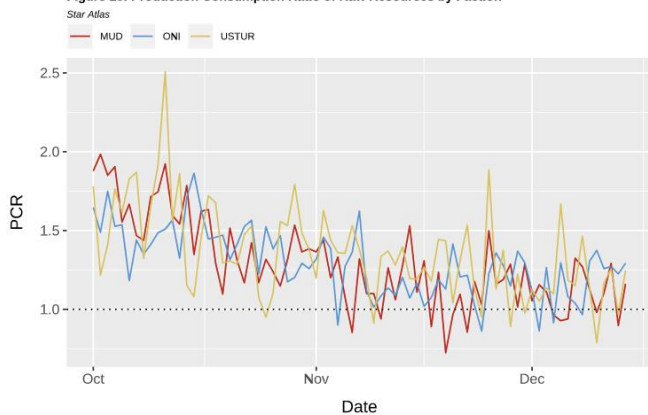
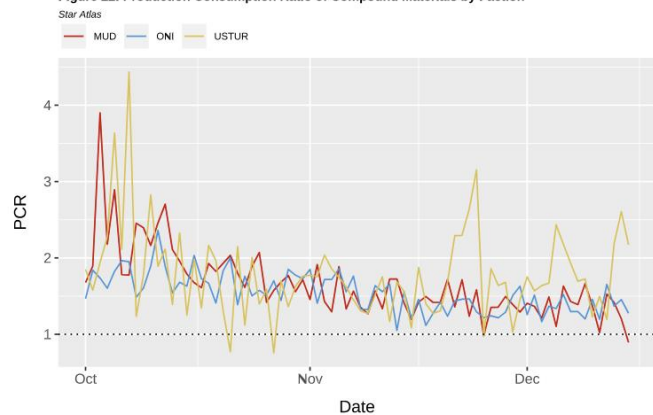


Figure 11: Production Consumption Ratio of Compound Materials by Faction



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The production and consumption of raw and compound materials were predominantly positive throughout the period. This trend supports an outstanding supply of inventories not used for crafting or redemptions and instead being hoarded in anticipation of future gameplay updates. The USTUR faction produced the largest daily surpluses in raw and compound materials.

⁶ Action counts divided by the average action count across all factions.

Figure 12: Production Consumption Ratio of Components by Faction

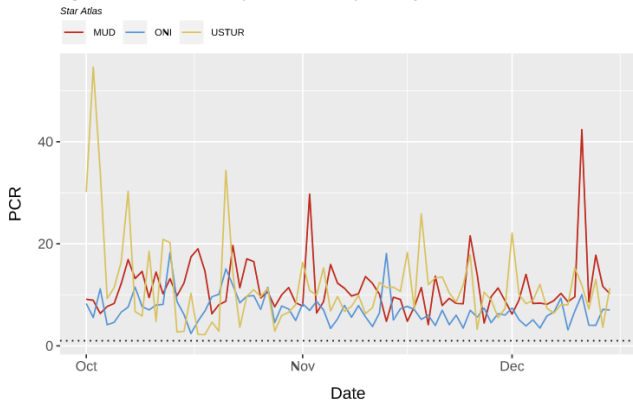
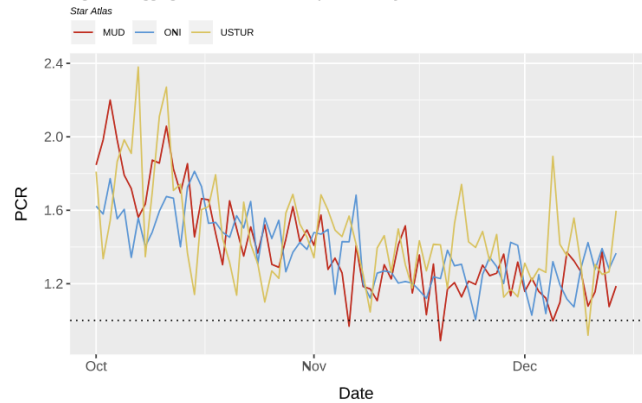


Figure 13: Aggregate Production Consumption Ratio by Faction



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Components tell a similar story, with large spikes in daily surpluses dominated by frameworks, the most popular component material. The notably larger components PCR is because of players willingness to accumulate in anticipation of future iterations of SAGE. Thus, “hoarding” behavior is to be expected. The resources consumed were put towards golden ticket production and redemptions as players sought to earn an income from their production efforts. Each faction exhibited distinct behavior in capitalizing on the golden ticket raffles.⁷

Figure 14: Commulative Net GTs Redeemed by Faction [Thous of Golden Tickets]

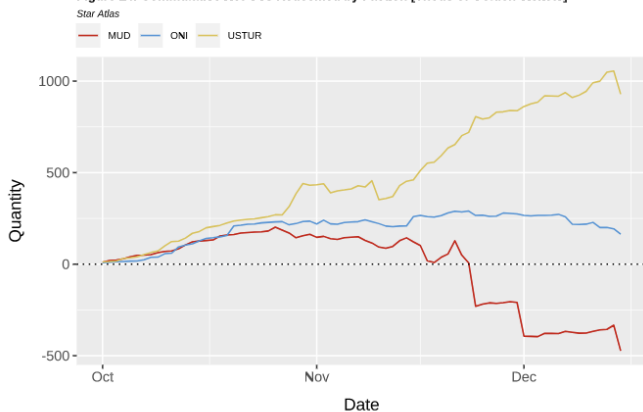
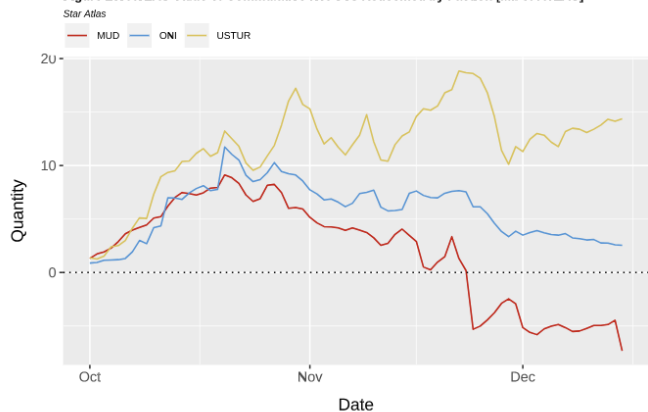


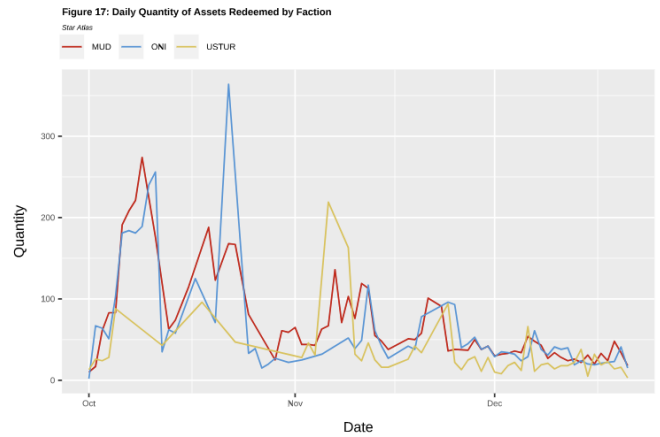
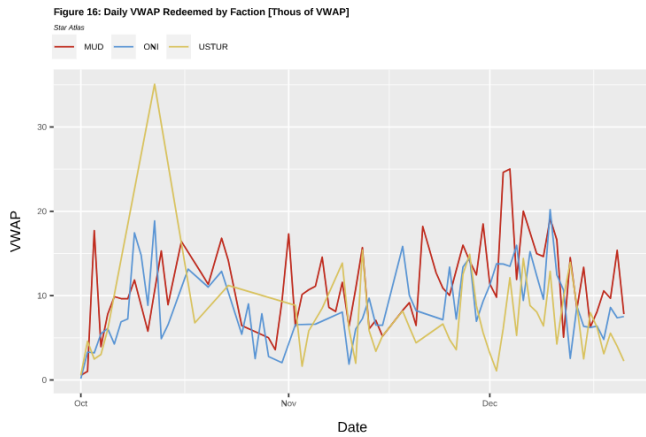
Figure 15: ATLAS Value of Commulative Net GTs Redeemed by Faction [Mil of ATLAS]



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The USTUR and ONI factions demonstrated a remarkable surplus in Golden Ticket production, generating an additional wealth estimated at around 20 million ATLAS. Conversely, the MUD faction experienced a deficit, particularly evident in the latter part of the quarter. This deficit created conditions for wealth transfer between factions, with a notable dynamic of buyer and seller roles emerging between USTUR, ONI, and MUD. Specifically, the surplus of Golden Tickets produced by USTUR and ONI found a market in the MUD faction, leading to a substantial wealth exchange.

⁷ Golden tickets could be crafted by players using in-game resources, then entered a weekly draw for high-ticket assets such as ships, claim stakes, and land.



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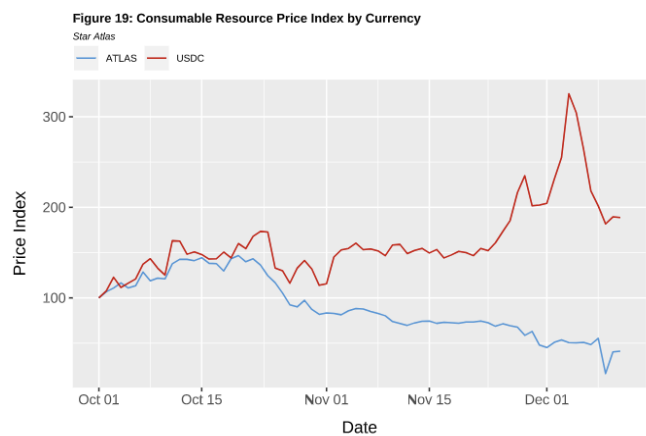
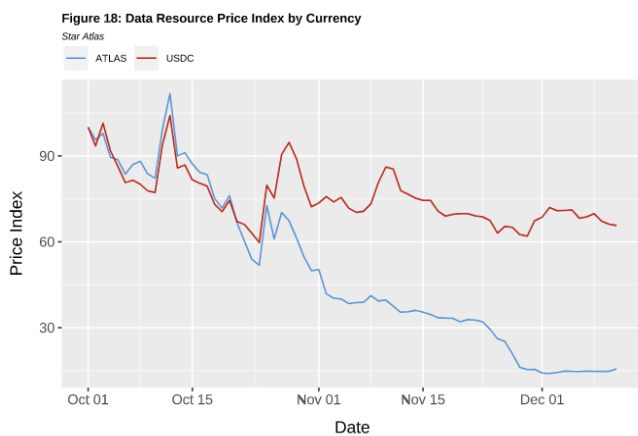
The MUD faction specialized in redemptions, surpassing the 800,000 VWAP mark over the quarter.⁸ Following closely behind, the ONI faction achieved just over 500,000 VWAP. While MUD and ONI were closely matched in the quantity redeemed, the gap in VWAP between them was less significant.

In contrast, the USTUR faction diverged in its strategic focus, focusing less on redemptions and instead channeling efforts into producing golden tickets.

Figure 17 highlights the popularity of Fimbul Airbikes as redemption assets marked by the observable spikes in redemption quantity at the start of the quarter. As Fimbul Airbike redemption pools emptied, the focus shifted to higher-class assets such as the Fimbul BYOS Butch and Fimbul Mamba EX, reflected in the increase in daily VWAP redeemed from the start to the end of the period.

Galactic Marketplace

Star Atlas Golden Era paved the way for newfound interest in the ATLAS currency. This new interest increased volatility throughout the resource markets as ATLAS/USDC increased parabolically compared to its stability in previous quarters.



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Survey Data Unit (SDU) **Price Index** (PI) denominated in USDC exhibited noteworthy stability, contrasting the decline observed in the ATLAS PI. This trend divergence supports the change in ATLAS's purchasing power throughout the period, which can be observed across all asset classes and

⁸ Redemptions are equivalent to crafting recipes. Players must burn the necessary resources to receive the redemption item.

is the result of ATLAS's increase in value relative to USDC. Conversely, consumable resources, including food, fuel, ammunition, and toolkits, increased in USDC value over the quarter. This can be attributed to increased demand for R4 in SCORE and changes in costs to produce R4 in SAGE Labs. Note the sharp decline in the USDC price of R4 at the end of the period, yet the PI for R4 is still up roughly 75% since the beginning of the quarter.

Figure 20: Raw Material Resource Price Index by Currency

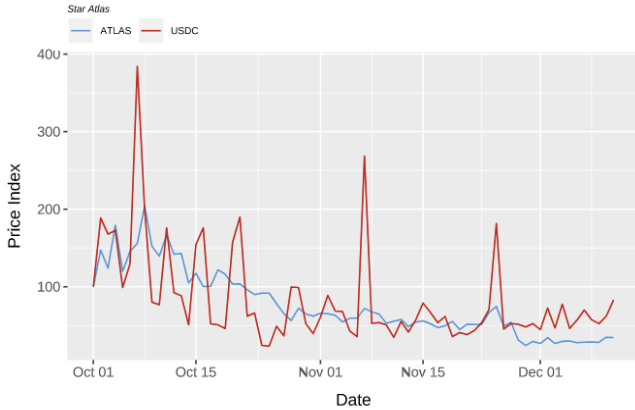
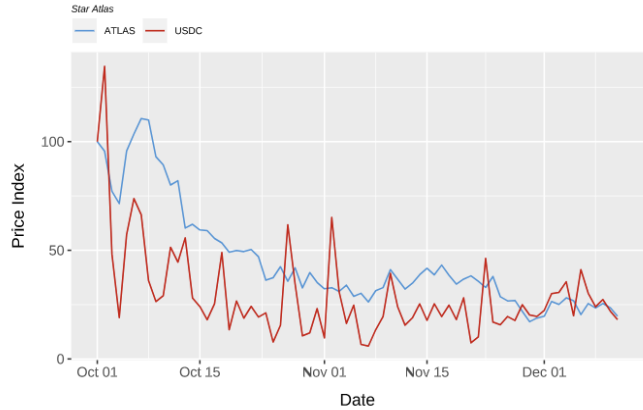


Figure 21: Component Resource Price Index by Currency



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Raw materials and components prices decreased in ATLAS and USDC, suggesting that these two resource classes are decreasing in value in the aggregate. This increase in affordability is the direct result of overproduction and price discovery. The second half of the quarter sees both resource classes stabilize in USDC and a continued decrease in ATLAS.

Figure 22: Compound Material Resource Price Index by Currency

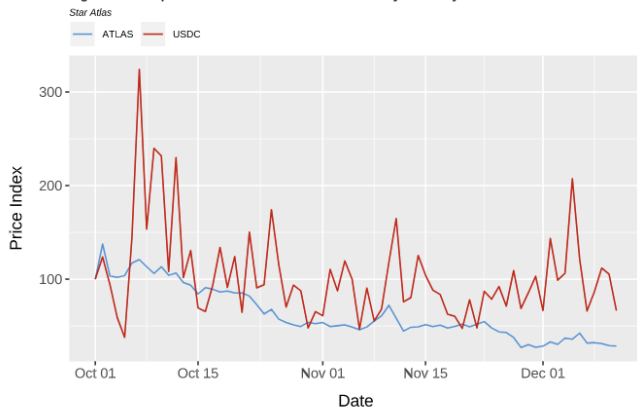
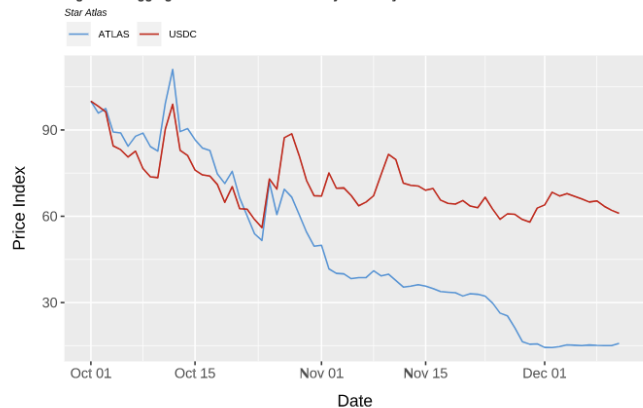


Figure 23: Aggregate Resource Price Index by Currency



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The resilience of compound materials in USDC relative to ATLAS indicates their position as a late-stage component in the production process. The aggregate price index in Figure 23 is notably influenced by the PI of data resources, highlighting a significant correlation between the two. The PI period started during a time of price discovery for resource groups in USDC, meaning that the initial price used in figures twenty through twenty-three was affected based on where the prices found equilibrium. This explains the large spikes and fluctuations in the USDC PI throughout the period. Fast forward the start date to one week later, and the USDC PI becomes stable.

Two forces directly impacting these dynamic resource indexes are claim stake and ship demand. Increased demand for claim stakes results in an increase in R4 supply and a decrease in demand for resources used to create R4 in SAGE Labs. Increased demand for ships increases the production possibility of raw resources, ATLAS output, and R4 demand. The following price indexes are a reflection of this change in demand.

Figure 24: Claim Stake Price Index in ATLAS and USDC

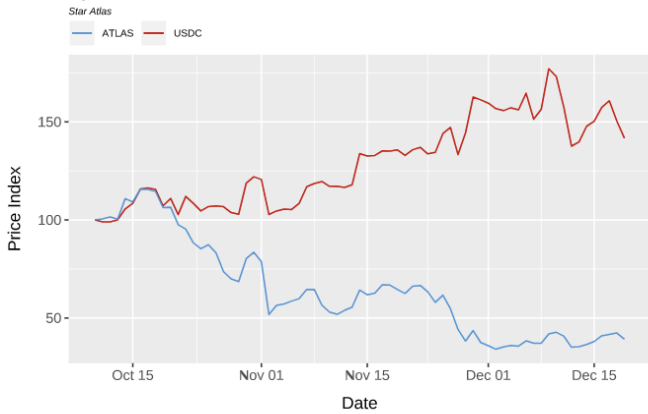
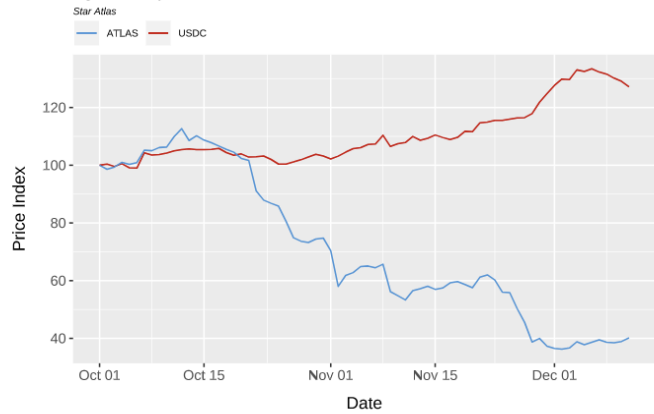


Figure 25: Ship Price Index in ATLAS and USDC



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Both ships and claim stakes decreased dramatically in their ATLAS pairs but increased in USDC over the quarter. Increases in USDC amplify the decrease in ATLAS because it is paired with the increase in ATLAS buying power. This trend supports the strength of production assets, which is incredibly important to the sustained growth of the Star Atlas economy.

Conclusion

The economic intensity of this quarter reflects the community's resilience, adaptability, and strategic decision-making. Winners and losers were defined by how VWAP was allocated, and strategies were employed. Similar to last quarter, we see MUD outperforming in most wealth-intensive areas. However, the ONI and USTUR factions were more involved in their economic decision-making and adaptability.

The success of SAGE Labs and the resurgence of SCORE as a substitute product brought the excitement of labor optimization to the Star Atlas economy. Resurgence in player wealth across census groups and increases in aggregate participation foster the growth needed to propel the economy forward through upcoming iterations such as starbase construction, combat, and much more.

While markets remain volatile, the strength of assets such as consumable resources, including food, fuel, ammunition, and toolkits in their USDC pairing cannot be overstated. This theme of strength carries forward into production assets and the broader ecosystem environment.

We believe the upcoming additions to the Star Atlas economy will bring new elements and gameplay opportunities never before seen in WEB 3.0 gaming. The tenacity of the player base, alongside the development of the grand vision, will create an economy that rivals that of a small nation.