



STAR ATLAS

State of the Economy

ATMTA, Inc.
Department of Economics

Q4 2024



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Executive Summary

Star Atlas updates in the Golden Era (SAGE) ecosystem created a new environment for economic participation and diversification, marked by steady ATLAS token emissions and changes in Star Atlas census groups. The introduction of local markets and infrastructure contracts boosted player engagement, offering new ways to earn and spend ATLAS. Meanwhile, rising token prices reshaped economic behaviors, reducing ATLAS sink rates and altering player strategies across factions.

The Star Atlas GDP surged this quarter, propelled by higher token prices and increased user participation. GDP per capita saw a dramatic rise, highlighting growing productivity and economic value per participant. When compared to global benchmarks, Star Atlas' GDP per capita outperformed several countries, including Mexico, Argentina, and Brazil, and closely aligned with nations like Costa Rica and the Maldives, emphasizing its growing economic stature.

Local market dynamics revealed new liquidity hotspots, enabling players to capitalize on resource trade and adapt to evolving market conditions. The Golden Ticket market demonstrated strong factional engagement, fostering opportunities for crafters and producers. Infrastructure contracts and loyalty points contributed to balanced economic activity, while the release of the SAGE Data Dashboard provided actionable insights into user behavior and market trends, ensuring strategic planning for future economic developments.

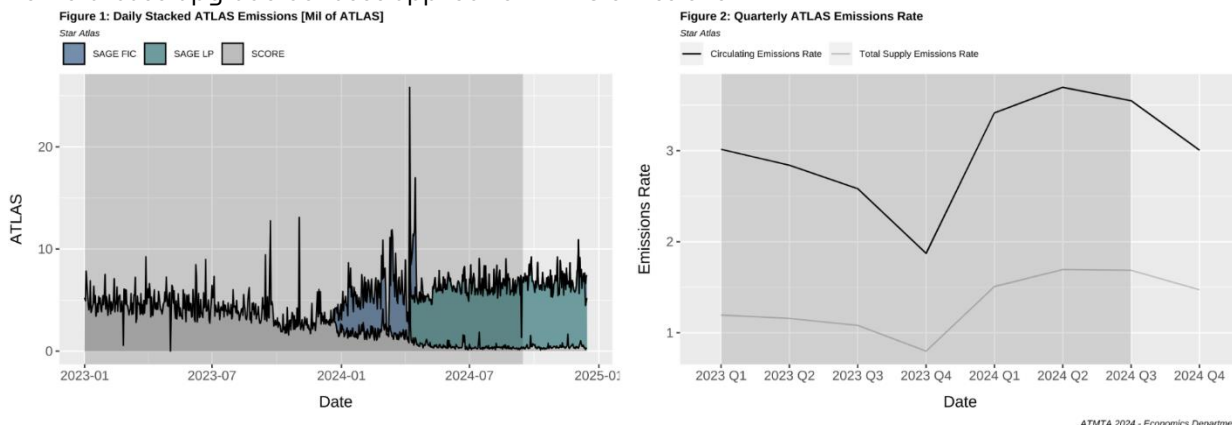
Key Highlights:

- Star Atlas Census wealth expanded by 58.2%, with currency-holding groups experiencing the most significant growth.
- Quarterly GDP grew by 84%, and GDP per capita grew by 59%. The MUD faction saw the highest growth across per-faction GDP metrics.
- The 2024 Star Atlas annualized GDP equated to \$21,110,542 with a GDP per capita of \$17,731.55, ranking higher than many Central and South American countries in GDP per capita.
- Golden Ticket resource producers saw increases in liquidity across their respective resource markets.
- Local markets redistributed Galactic Marketplace liquidity across Galia, with USTUR's MRZ-28 emerging as the most liquid market as of the snapshot date.
- The launch of the Star Atlas Community Economic Dashboard provides in-game data analytics that updates daily.

As Star Atlas evolves, so does the player base with continued interest in feature releases and excitement for the future. Iterations to the community dashboard, alongside events such as the monthly economic help to create transparent economic data and insight. The strong growth observed this quarter was the result of a wide range of catalysts, primarily related to token emissions, inflation, and appreciation.

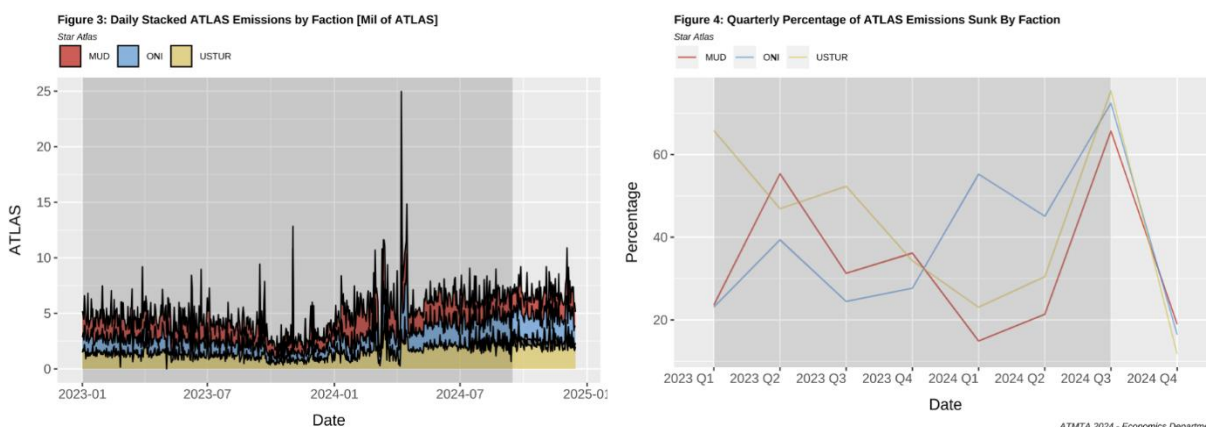
Emissions and Inflation

Token emissions remained steady over the period, with increases in Faction Fleet (SCORE) margins incentivizing passive emissions. However, updates to the loyalty points (LP) system in Star Atlas Golden Era (SAGE) Starbased and the release of infrastructure contracts introduced a slight decrease in emission stability toward the end of the quarter, as shown in Figure 1.¹ Average daily emissions reached 6.97 million, reflecting an 8% increase compared to the previous quarter – likely due to the new starbase upgrade bonuses applied to ATLAS emissions.



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The quarterly circulating ATLAS emissions rate remained steady at 2.98%, as shown in Figure 2. Maintaining a consistent emissions rate is critical for economic growth, as it encourages spending while reducing uncertainty among economic participants. Emissions against total supply were much lower at 1.48%, reflecting the percentage of total supply emitted this quarter. Figure 3 further breaks down the emissions from Figure 1 by faction. This quarter, MUD recorded the highest average daily emissions at 1.87 million, while USTUR and ONI followed closely, each averaging 1.61 million daily. This is due to MUD’s larger interest in SCORE compared to ONI and USTUR.



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Figure 4 presents a stark contrast to the previous quarter, as rising token prices have reduced player willingness to sink ATLAS into primary sales, participate in ATLAS Prime, or lock tokens in the ATLAS locker. This quarter, all three factions saw a significant drop in their ATLAS sink rate, falling from an average of 71% to approximately 16%. However, excluding ATLAS locker outflows, the percentage sunk would have shown an increase of roughly 3% compared to the previous quarter.

¹ The LP ATLAS pool was reduced from 6 million to 4.5 million, creating room for infrastructure contracts to emit ATLAS without affecting daily emissions.

The Star Atlas Census

The Star Atlas census continues to serve as a cornerstone economic measure in the quarterly reports.² Significant surges in token prices, combined with the introduction of new assets such as infrastructure contracts, golden tickets, and crew, contributed to growth in both population counts and overall wealth across census groups.

Table 1: Star Atlas Census (12-15-2024)

Category	Currency	NFT Owner	Voter	Employed	Count	Share	Wealth	WShare
Nonresident Currency	Y				73652	50.9	51.25	33.98
Nonresident NFT	Y	Y			8687	6.0	5.03	3.34
		Y			19877	13.7	8.44	5.59
Nonresident Locked POLIS	Y		Y		2738	1.9	9.36	6.21
	Y	Y	Y		1187	0.8	5.44	3.61
Residents	Y	Y		Y	27258	18.8	36.99	24.52
		Y		Y	7294	5.0	3.78	2.51
Citizens	Y	Y	Y	Y	4066	2.8	30.54	20.25
Total					144759	100.0	150.83	100.00

^a Exclude wallets with <\$0.10 in total market value

^b Wealth measured in millions of USDC

The total population count decreased slightly this quarter, primarily due to non-resident currency holders who moved tokens to a centralized exchange and swapped them into a different currency. Resident and citizen groups saw changes in population counts as short-term POLIS balances were removed from the POLIS locker and swapped. The total resident population remained relatively similar, slightly increasing its share of the total population to 23.8%. Non-resident groups remained relatively unchanged, aside from the previously mentioned non-resident currency group.

Contrary to population trends, aggregate wealth grew significantly, with citizens increasing their wealth by approximately 7 million despite lower participation. Non-resident currency groups also experienced substantial wealth gains, benefiting from token prices which increased by 105% since the start of the period. All groups exposed to token volatility witnessed a rise in wealth this quarter.

These increases in wealth also influenced wealth share distribution, with non-resident currency groups significantly increasing their share relative to other groups. While the wealth share of the remaining non-resident groups remained stable, residents and citizens experienced a decline in their share as the non-resident currency group's share expanded.

² Column six has been renamed from "Freq" to "Count", and column seven has been renamed from "Frac" to "Share".

Star Atlas Gross Domestic Product

Contrary to the previous quarter, the Star Atlas gross domestic product (GDP) saw positive growth this period. Increases in the user base lead to increases in production and burning of higher-value resources. Gameplay incentives, along with increased buying power resulted in increased spending. Figure 5 highlights this increase, showing an 84% gain from the previous quarter to 60,315.83 daily. This increase and previous quarters put the 2024 Star Atlas GDP at \$21,110,542, with a GDP per capita of \$17,731.55.

Figure 5: Star Atlas GDP [Thous USDC]

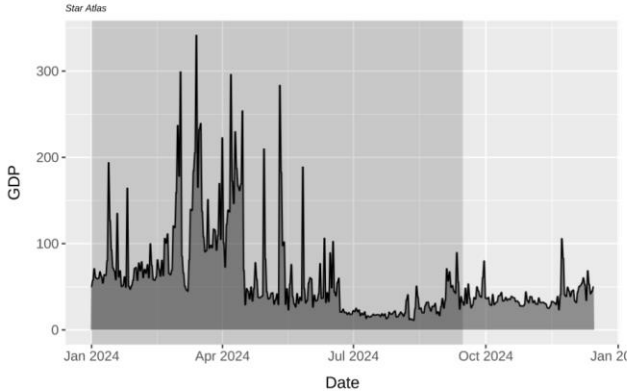
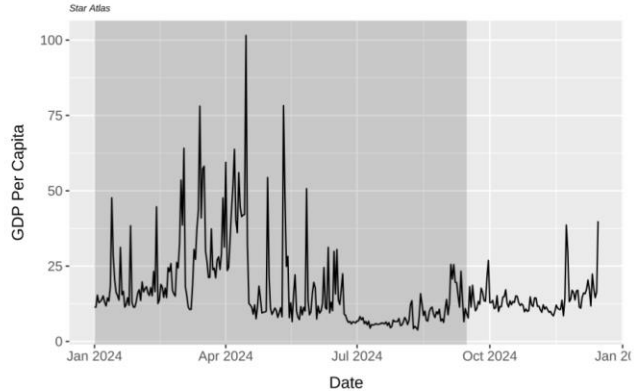


Figure 6: Star Atlas GDP Per Capita



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Daily GDP per capita in Figure 6 exhibits a striking surge near the end of the period, rising from 10.59 in the previous quarter to 16.88 in the current period, reflecting an increase of 59%, contributing greatly to the annualized figure above. This jump is particularly noteworthy because it suggests that the combination of more daily active users and a higher GDP per capita is the result of a boost in productivity throughout the quarter. As a result, participating in the Star Atlas economy is becoming increasingly appealing to onlookers and existing players.

Figure 7: Stacked Star Atlas GDP by Faction [Thous USDC]

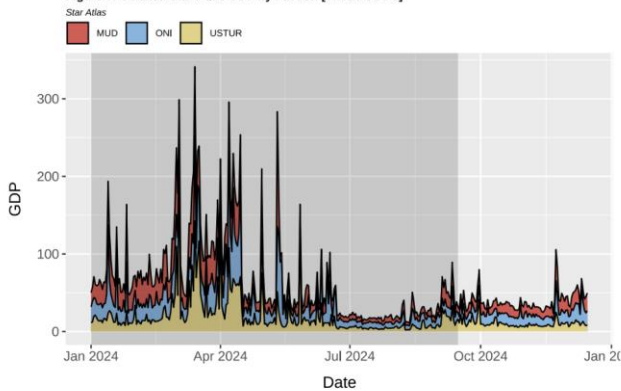
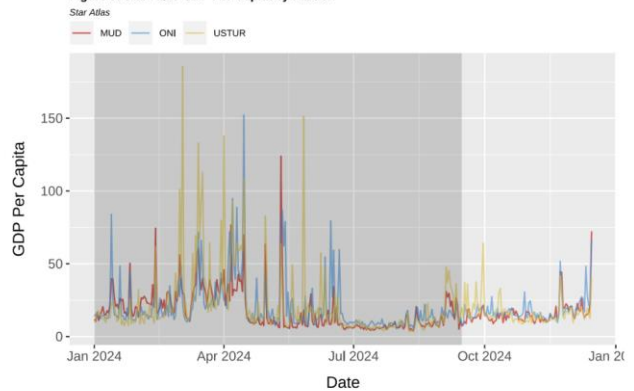


Figure 8: Star Atlas GDP Per Capita by Faction



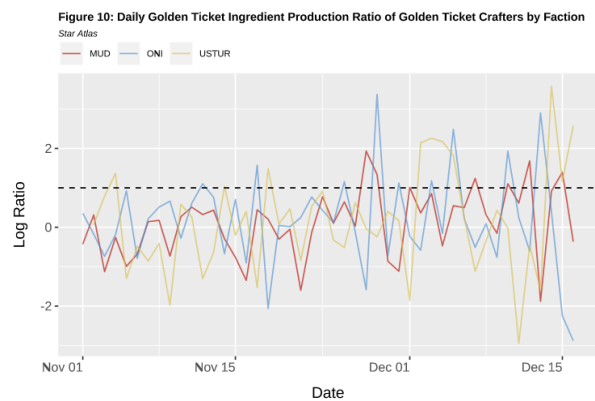
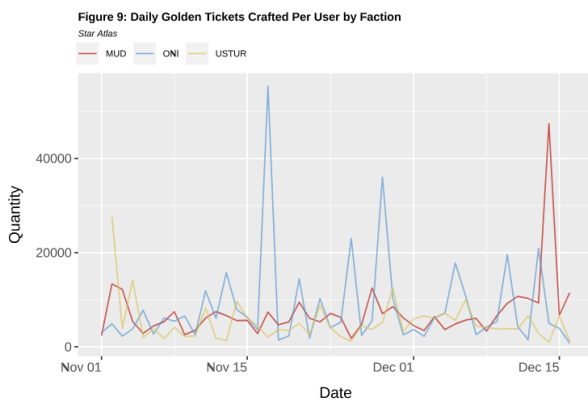
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Figure 7 and Figure 8 break down the above GDP figures by faction. Daily MUD GDP was \$20,570.25, marking a 55% increase from the previous quarter. ONI also saw a notable surge, reaching \$14,678.69—an increase of 34%. USTUR performed similarly to the ONI faction, raising its daily GDP by 36% to \$10,579.5. GDP per capita showed comparable growth: MUD increased by 61%, ONI by 41%, and USTUR by 48%.

The Star Atlas economy's expansion has led to annualized figures that exceed certain global benchmarks. An annualized aggregate GDP of 21,110,542 places Star Atlas at just under 33% of the current lowest GDP country. However, its GDP per capita of 17,731.55 puts it just below Costa Rica and slightly above the Maldives. Notable countries with substantially smaller GDP per capita figures than Star Atlas include Mexico, Argentina, Brazil, and Thailand, allowing Star Atlas to rank within the top 100 countries. Individual factions also rank highly in GDP per capita. The MUD faction, with an annualized GDP per capita of 6,052.40, stands on par with Fiji and above countries like Iran, the Philippines, and Egypt. ONI's GDP per capita of 6,881.96 outpaces MUD, placing it on par with the Marshall Islands and above countries such as Ecuador, South Africa, and Guatemala. USTUR, with the highest GDP per capita among the factions at 7,249.63, aligns with the figure for Tuvalu and surpasses all countries mentioned above.³

Golden Ticket Market

This quarter saw the return of the golden ticket recipe, allowing crafters to enter into a reward pool for a chance to win high-value items such as Fimbul BYOS Tankships, Opal Bitboats, and much more. Crafting Golden tickets required nine distinct resources attainable through mining, crafting, or purchasing on the secondary market. Figure 9 highlights the average number of golden tickets crafted per user, per faction, per day. The MUD faction showed the highest risk tolerance, crafting on average 8,420 per day, followed by MUD and USTUR with 7,293 and 5,249 crafted per day respectively.



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Figure 10 shows the logged production-to-consumption ratio of golden ticket recipe resources by golden ticket crafters per faction.⁴ Taking the log value allows for a simplified view of activity above and below 1, making it easier to identify producer surplus and deficit. As the period progressed, golden ticket crafters became less and less reliant on the market and began producing more of the required ingredients themselves. This provided opportunities for producers to meet the demand of golden ticket crafters by selling their goods into the market during the latter half of the quarter.

³ International Monetary Fund. "GDP per Capita, Current Prices - WEO Data Mapper." Accessed December 16, 2024. <https://www.imf.org/external/datamapper/NGDPDPC@WEO/OEMDC/ADVEC/WEOWORLD>.

⁴ The production to consumption ratio is calculated by taking the total sum of resources produced on a day, and dividing by the total consumed. Less than 1 indicates that there aren't enough resources being produced to meet the demands of the economy, and greater than 1 indicates that more resources are being produced than are demanded by the economy.

Figure 11: Daily Golden Ticket Ingredient ATLAS Volume by Faction [Mil ATLAS]

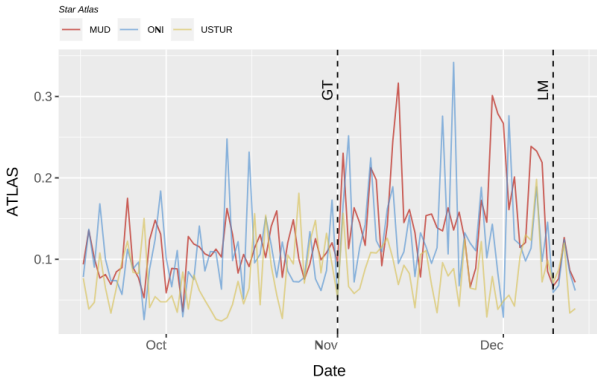
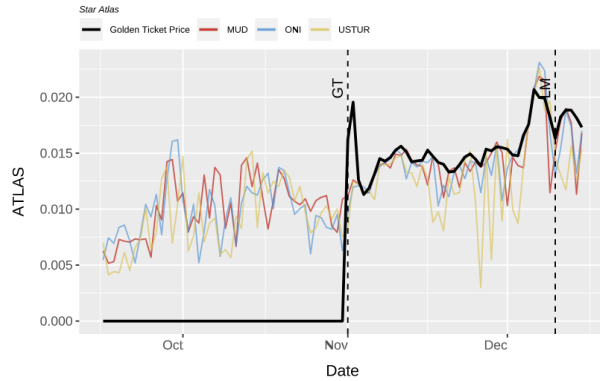


Figure 12: Daily Golden Ticket Market Price and Recipe Cost

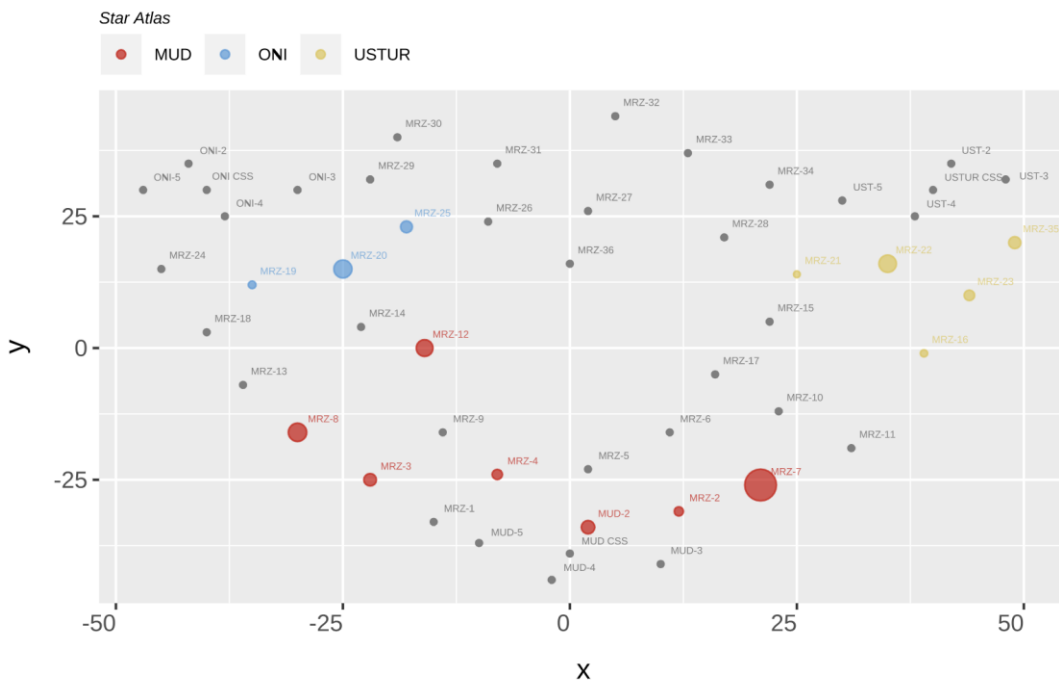


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The production of Golden Ticket ingredient resources experienced a notable surge in marketplace volume, as Golden Carnival participants introduced additional liquidity into these markets, as illustrated in Figure 11. This shift underscored the opportunities available to mining and production fleets, allowing them to capitalize on Golden Ticket ingredient markets—such as titanium, frameworks, electronics, and others—during this period.

Figure 12 reinforces these insights by comparing the Golden Ticket market price with the cost of acquiring the necessary ingredients directly from the marketplace, factoring in crafting and marketplace fees. On days when ingredient recipe costs were more than 7% below the Golden Ticket market price, Golden Carnival participants benefited from purchasing ingredients directly from the marketplace.⁵ Under all other conditions, buying Golden Tickets remained the more cost-effective decision.

Figure 13: Local Markets Golden Ticket Ingredient Trade Activity by Faction



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⁵ The crafting fee in SAGE Starbased is currently 7%.

The introduction of local markets in SAGE Starbased exposed the coordinates of golden ticket ingredient trade activity, likely reflecting underlying production efforts. As highlighted in Figure 13, sectors such as MRZ-7 in the MUD faction, MRZ-22 in the USTUR faction, and MRZ-20 in the ONI faction experienced the highest trade volumes for these resources. These locations became focal points for Golden Carnival participants and producers aiming to capitalize on the surge in liquidity.

Local Markets

Pre Q4-2024, the Galactic Marketplace hosted all asset trading within the Star Atlas ecosystem, creating a liquid environment for buyers and sellers alike. Local markets changed this, allowing players in SAGE to buy and sell resources at each distinct sector within the Galia expanse. Now, with over 50 distinct markets to choose from, players gain more economic freedom and opportunity than ever before. Alongside this update, was the release of infrastructure contracts, craftable recipes in-game that allowed players to redeem resources for ATLAS directly from select marketplaces at a fixed price of 2 ATLAS.⁶ Now, players can earn ATLAS by accumulating loyalty points (LP), or through the new Infrastructure contract gameplay loop.

Figure 14: Daily ATLAS Claimers by Faction

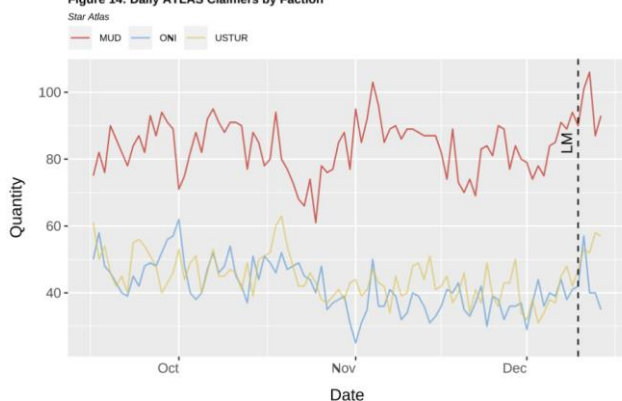
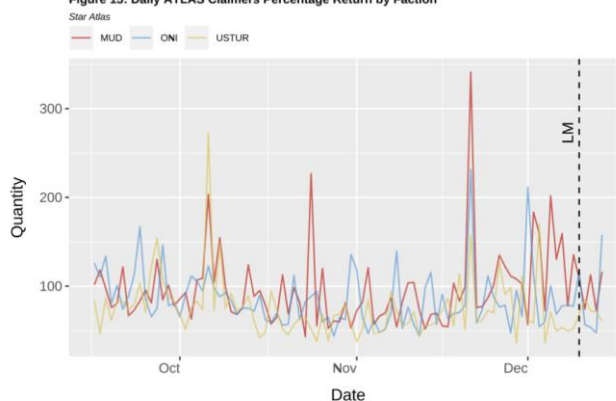


Figure 15: Daily ATLAS Claimers Percentage Return by Faction



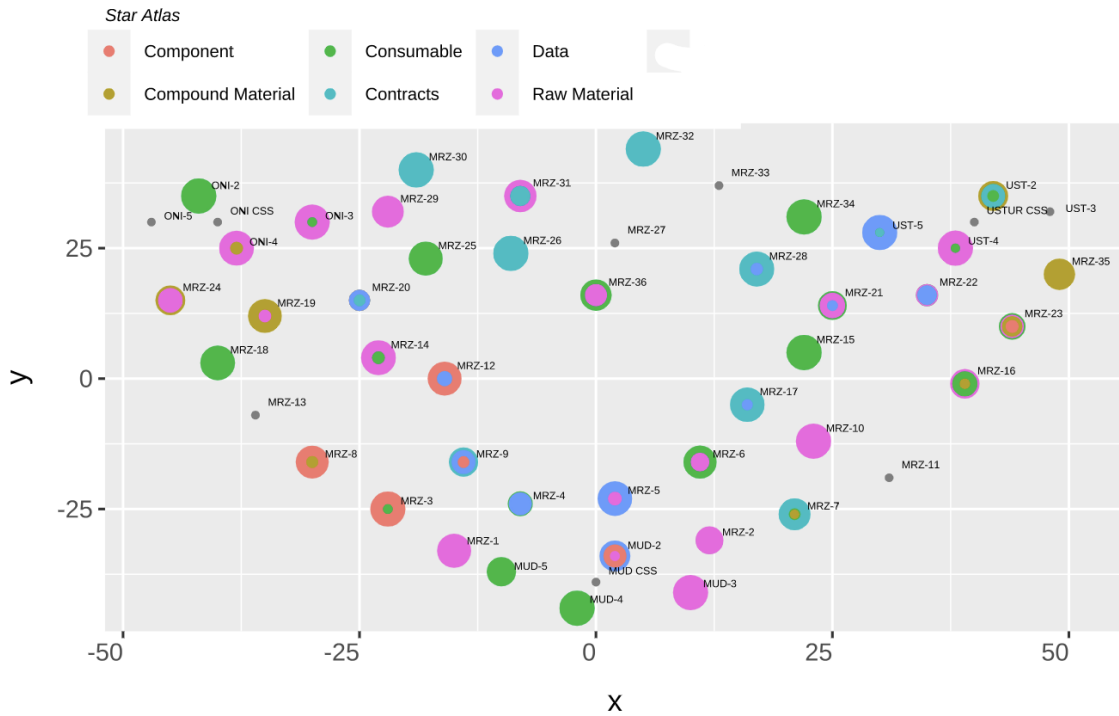
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Figure 14 displays the number of players claiming ATLAS through LP rewards or infrastructure contract redemptions, organized by faction. After introducing local markets, a noticeable increase in participation emerged, reflecting enthusiasm for this highly anticipated feature.

Figure 15 offers a closer look at the average return for ATLAS claimants before and after the update. Excluding Solana network fees, the mean return exceeds 90% across all factions. However, this measure differs considerably across wealth groups, as smaller fleets are more affected by network fees, reducing their margins. The release of local markets, along with other gameplay improvements, contributed to lowering these fees over time, aiming to make the returns highlighted in Figure 15 more representative across all wealth levels. For now, this figure primarily captures the experience of medium- to higher-wealth groups claiming ATLAS pre- and post-update.

⁶ Infrastructure contracts are the updated version of Council RFRs released as a promotion in an earlier SAGE update.

Figure 16: Local Markets Resource Trade Activity by Resource Group



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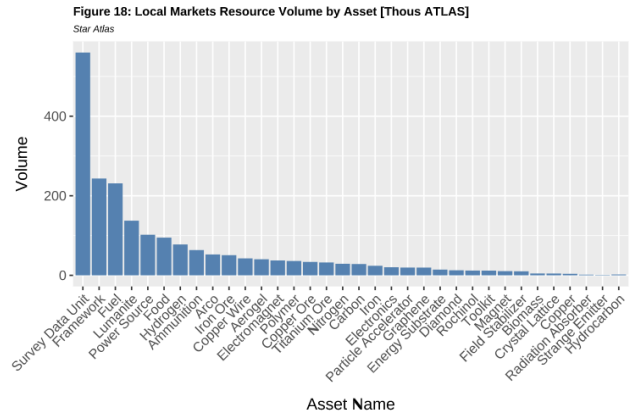
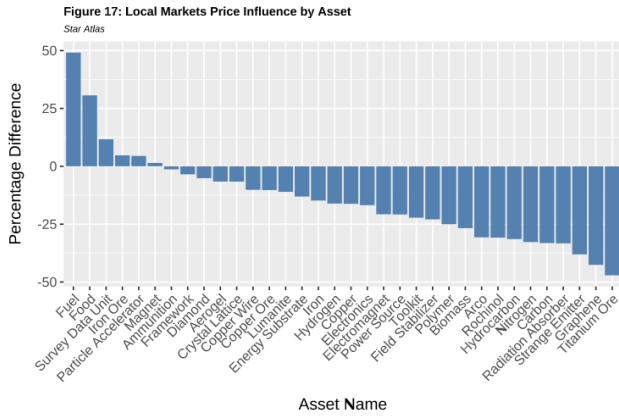
Figure 16 takes a broader perspective, examining the sectors where resource trade is most active within each resource group. At the time of this snapshot, each faction displayed a fairly uniform distribution of resource activity across its local markets. Survey Data Unit (SDU) trade patterns, previously concentrated around favored scanning areas and high-traffic starbases identified before the update, are now beginning to spread as players expand their operations into new local markets.

Table 2: Top 5 Local Markets by Liquidity

Rank	Faction	Name	Volume
1	USTUR	MRZ-28	1329495
2	MUD	MRZ-7	770117
3	MUD	MRZ-9	714839
4	ONI	MRZ-26	635822
5	ONI	MRZ-30	492650

Based on the resource trade shown in Figure 16, Table 2 ranks the top five most liquid local markets since their introduction. USTUR’s MRZ-28 emerged as the most liquid, followed by MUD’s MRZ-7 and MRZ-9 in second and third place, and ONI’s MRZ-26 and MRZ-30 took fourth and fifth. These rankings will likely shift as markets mature and players discover new opportunities.

Figures 17 and 18 provide more granular insights into the shifts in resource price and volume within local markets. Figure 17 highlights the percentage change in average prices in local markets compared to the Galactic Marketplace during the pre-release period. Given the recent nature of these economic changes, resource prices remain highly volatile. This quarter, commodities like food, fuel, and survey data units (SDUs) exhibited the most significant price increases, while resources such as strange emitters, graphene, and titanium ore experienced the largest declines.



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Figure 18 compares each resource by total ATLAS trading volume, with SDUs, frameworks, and fuel leading in volume, while hydrocarbons, strange emitters, and radiation absorbers lag. As the markets continue to develop, these rankings will likely shift, creating strategic opportunities for players capable of anticipating and adapting to emerging trends.

Star Atlas Ecosystem Dashboard Insights

This quarter, we are excited to announce the release of the Star Atlas Ecosystem Dashboard now located on the Star Atlas DAO website.⁷ While the dashboard will see many additions in the near future, the initial version still provides excellent insights. Daily active users (DAU) in the SAGE Starbased program saw a noteworthy increase throughout the period, ranging from a low of 1011 to a high of 1273 as seen on Page 1: Figure 1 of the dashboard below.⁸ Updates to the SAGE Starbased program can be somewhat attributed to the rise in DAU. However, the primary driver was the increase in token prices and the subsequent increase in player margins as a result.

Page 1: Figure 1 -



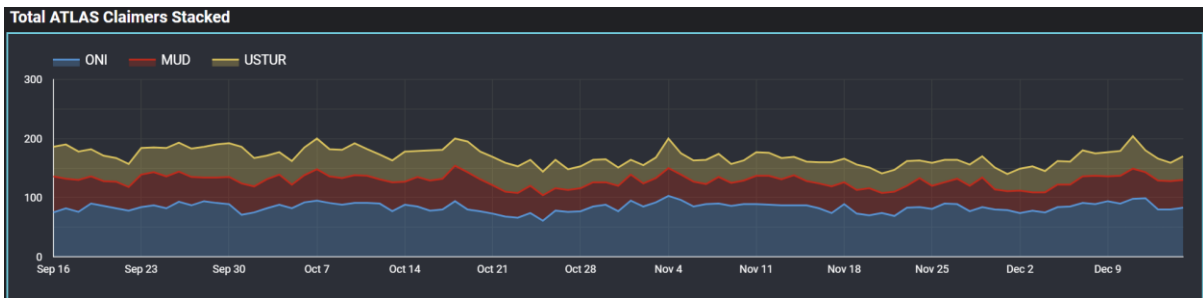
Surprisingly, we also see an increase in users claiming ATLAS through loyalty points at the end of the period across all three factions shown in Page 2: Figure 2 below. This indicates that the reduction in the LP emissions pool from 6 million down to 4.5 million had no significant impact on the willingness

⁷ govern.staratlas.com/more

⁸ Using the zoom sliders, users can isolate the period of interest in which they want to observe, highlighted by the white bars on the x and y axis.

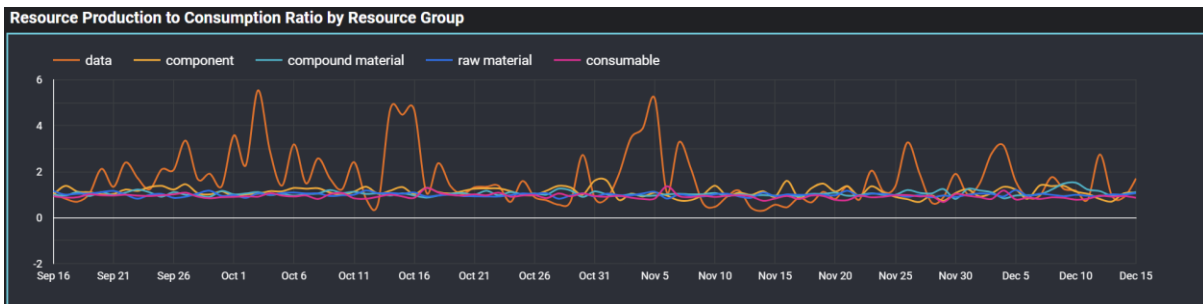
to participate in LP-related activities. Throughout the period, ONI saw the most participation with 109 claimers per day, followed by MUD with 62, and USTUR with 53 per day.

Page 2: Figure 2 -



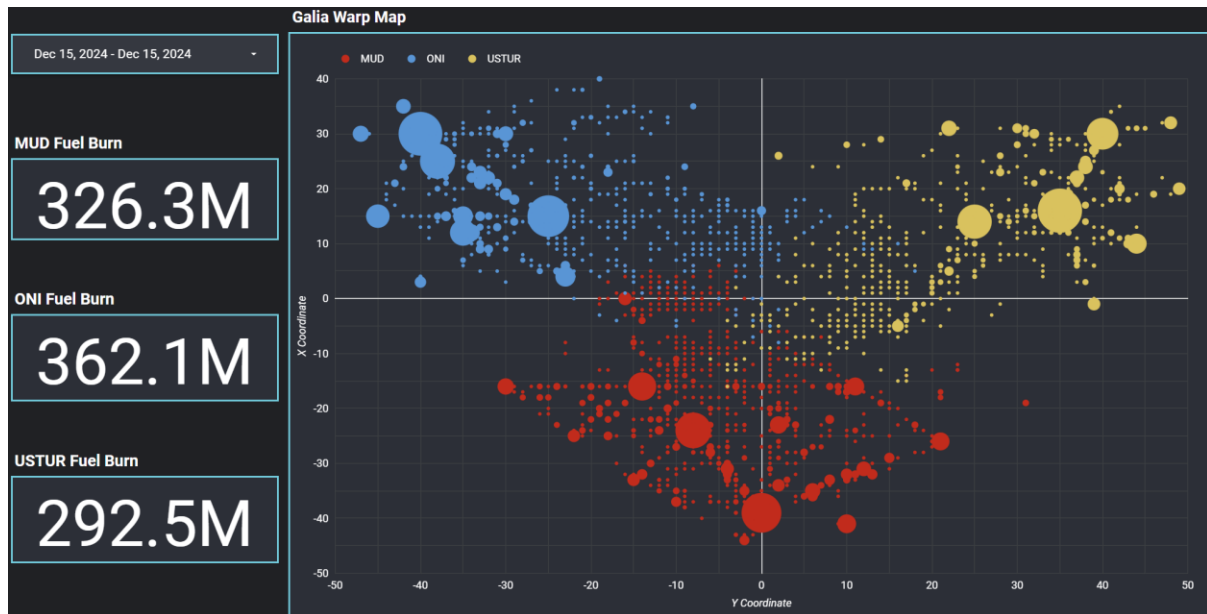
Looking at the production side of this influx in users, we see relative stability across markets, with consumables having the lowest production-to-consumption ratio across the period.⁹ This is due to subsidization from the Faction Claims program, where users lock claim stakes to produce consumable resources. Data units saw the highest surpluses produced throughout the period and continue to be the resource group with one of the greatest outstanding balances.

Page 3: Figure 3 -



The locations of these operations can be observed in Page 4: Figure 1 below, which shows the warping activity of SAGE Starbased players on 2024-12-15. Larger activity, indicated by bubble size, lines up with the highly liquid local markets showcased in Table 2 above. Approximately 980 million fuel was burned on this day alone, which is a market value of 968 thousand ATLAS.

⁹ The production to consumption ratio is calculated by taking the total sum of resources produced on a day, and dividing by the total consumed. Less than 1 indicates that there aren't enough resources being produced to meet the demands of the economy, and greater than 1 indicates that more resources are being produced than are demanded by the economy.



The launch of the Star Atlas Community Economic Dashboard has transformed how in-game data is shared and analyzed, setting a new standard for reporting within the ecosystem. Upcoming updates aim to deliver a comprehensive view of economic activity across the Galia Expanse. The Q4 2024 Economic Quarterly leverages the first version of this dashboard to enhance engagement between the two products while offering deeper economic insights, specifically in the Starbased program this quarter. Many future updates will stem from discussions held during the Monthly Economic Forum, hosted in the Star Atlas community Discord server on the first Thursday of each month. Community members are encouraged to participate and contribute suggestions and feedback. We look forward to seeing you there.

Conclusion

This quarter marked a turning point in the Star Atlas economy. The introduction of local markets, stable token emissions, and new recipes offered players more ways to participate, adjust their strategies, and respond to changing conditions. Increased token values, along with resources like the Community Economic Dashboard, aim to improve the way participants track trends, compare factions, and make informed decisions.

Although census groups faced volatility and shifts in participation, the underlying economic systems proved adaptable. Differences in production methods, changes in resource markets, and evolving approaches to ATLAS emissions highlighted the ecosystem's potential for long-term growth. Diversification across systems such as golden tickets and local markets revealed opportunities for market participants large and small.

Moving forward, the Star Atlas economy is well-positioned to continue developing and refining its core feature set. The monthly forums, expanding gameplay features, and richer dashboard data streams will help maintain engagement, encourage new participants, and support ongoing experimentation. In this environment, players can anticipate more meaningful economic interactions and sustained opportunities in the future.