PakTech Today | Pakistan's Premier Technology Magazine
Vol. 01, Issue 17 • ISSN: 3136-2729

TECHNOLOGY FEATURE Industrial News / Technology Report / Research Communication

How Amazon Used Real-Time Analytics and AI to Boost Revenue by 28% in 2026

As Amazon announced its first quarter 2026 results at the end of April, it was not the headline revenue number. It was AWS that was growing at 28 per cent - the quickest rate in almost four years - on a base already producing over a hundred billion dollars annually. Such a growth, on such a scale simply does not come as an accident. The brief explanation is that it took Amazon several years to develop the technology to make AI work, not just Big Data talking. And in 2026, that infrastructure began to enjoy a payoff in a way difficult to challenge.

By **Maryam Nadeem** | University of Agriculture, Faisalabad | **Published**: September, 2026

The Numbers First

The total revenue that Amazon estimated as 181.5 billion in Q1 2026, or 17 percent higher than the previous year. The operating income of 23.9 billion was an increase of 30%. The net income of 30.3 billion was more than 2 times its amount in Q1 2025.

But the actual tale was AWS. The cloud division generated revenue of $37.6 billion between the quarters - two billion higher than analysts projected. It has a new operating margin of 37.7, which translates to the fact that AWS is currently one of the most profitable large business enterprises on the planet. And has a backlog of revenue of $364 billion - Promises of future spending by enterprise customers who have signed on the dotted line already.

A core issue evident on the earnings call by CEO Andy Jassy is the following: It is extremely unusual to see a business grow this fast on a base this large. We have never witnessed a technology grow this fast on such a large base.

What Actually Drove The Growth

Many businesses are talking about AI. It was constructed with plumbing by Amazon. The variance is reflected in the results.

Amazon Bedrock, the service that allows businesses to plug into AI models - including those of Anthropic, Meta, and others - via AWS was the largest driver. By Q1 2026, the number of tokens processed using Bedrock will be greater than the total amount processed in all previous quarters. Bedrock experienced an increase in customer spending at a rate of 170 percent in one quarter. It is now being used by almost 80% of the fortune 500 businesses. It is no longer a niche product, but rather a default mode of running AI workloads by enterprises.

And there is the chip business. Amazon has been developing its own processors - Trainium to train AI models, and Graviton to handle general processing workloads by the cloud - and it is beginning to add up. The chips business achieved a run rate of $ 20 billion of annual revenue in the first quarter and the business generated triple-digit percentage increases in annual revenues. Amazon now has more than $225 billion worth of committed revenue on Trainium in particular, said Jassy. To place allowances, Trainium 3 did not begin shipping until the start of this year.

Next there are the partnerships. During Q1, OpenAI more than doubled its AWS commitment, reaching aggregate values of $100 billion. Amazon accepted to put another $25 billion in Anthropic. Meta had given itself the mission of executing tens of millions of Graviton cores. These are not a mere series of press releases- each of these is a complete year of future cloud usage already committed.

Figure 1: Real Data Analytics —shows how Amazon uses it to boost its revenue year by year. Credit: Maryam nadeem / PakTech Today

The Personalization Engine Behind E-Commerce

Although AWS is making the headlines, Amazon retail begins having one of the strongest quarters in years, as well. Unit growth was at 15 per cent. - the highest since the pandemic period.

The main portion of that is also reduced to the way Amazon utilizes the real-time data. Browsing Amazon, there is no need to have the recommendation engine working on a fixed profile that was created several days ago. It is live time and on-demand, as part of your active session. Enter hiking boots, and even as you type the system is looking up sockets, trail maps and equipment - not because you once bought outdoor products in the past, but because your current behavior is being computed on the fly and being compared to patterns set by millions of other users.

In March 2026, Amazon improved AI-enabled personalization systems to process up to 40 million products - eight times more than previously - with an error rate of 14 percent. The fact that that improvement might only be by 1 percent should Amazon improvement, but at the scale, a 1 percent enhancement in the Amazon conversion area amounts to billions of dollars.

This is also the case in the advertising business. Amazon ad revenues increased 24 percent over the last year to $17.2 billion in Q1 alone - more than $70 billion in the past twelve months. Advertisers are willing to pay high-premiums to appear on Amazon as the targeting does actually work. And the targeting is effective since it is based on the same behavioral data in real time, which drives the product suggestions.

The Cost Of All This

None it was cheap. In the Q1 2026 all alone Amazon capital expenditures totalled 44.2 billion, almost twice that which it spent in Q1 2025. It intends to spend $200 billion in the entire year. What a huge figure, and the reason why the free cash flow decreased by turning the 25.9 billion figure to 1.2 billion of the trailing twelve-month basis.

This has been viewed mixed by the investors. Not that the results were poor, but the stock fell after the earnings release, due to the spending scale scale questions how and when it turns into profit.

The response of management is basically: evident in the backlog. $364 billion about the committed future revenue. $225 billion specifically amassed commitments to Trainium chips. Anthropic and OpenAI committed years use. The capex is not speculative, it is the construction of infrastructure to meet demand, which has already been contracted.

Why This Matters Beyond Amazon

The Q1 2026 performance of Amazon is an easy tool to anyone who attempts to comprehend where AI investment is actually heading towards. The companies whose really got their returns never attached an AI-based chatbot to an already existing product. They are the ones who did the re-core-infrastructure, data pipelines, personalization layers, custom compute, and then allow the applications to grow on top of that infrastructure. Amazon has been carrying out that feat in the last ten years. When the foundation is finally in place just what it looks like is the 28% growth.

One more thing that is worth to be noticed about the vertical integration. Amazon is doing all this itself, building its own chips, its own cloud, its own models, and all this to operate its own retail business. The data and efficiency is fed to the other layers. It is not a strategy which most companies will be able to replicate within short periods but within smaller sizes as well the principle will hold.

What Comes Next

For Q2 2026, Amazon has guided for $194 to $199 billion in revenue — 16 to 19% growth. Prime Day will likely be leading a change in Q2 this year, and this should come as a boost to retail. On the AWS side, that $364 billion backlog will be focused on converting that backlog into recognized revenue as well as scaling up Bedrock and the chips business.

Whether the AI spending cycle is in the mature stages or it remains in the infancy stages is the bigger question that is hovering over Amazon and indeed over the entire of the big tech. The Amazonian bet appears to be evident according to the backlog, the partnership commitments, and the acceleration in Bedrock usage. Their demand is only beginning to start, they think.

Checking Q1 2026, one can hardly say that they are wrong.

About the Author

Maryam Nadeem is an Agentic AI Engineer and Machine Learning and Deep Learning expert currently pursuing her degree in Computer Science. She works at the convergence of artificial intelligence and cybersecurity, with a particular focus on social engineering defence systems, AI-augmented threat modelling, and the application of deep learning to anomaly detection and behavioural analytics in enterprise security environments. Her work spans both the offensive and defensive dimensions of the AI-security intersection, giving her a practitioner's understanding of how the same technical capabilities can be weaponised and defended against. She is committed to elevating the cybersecurity conversation in Pakistan's technology community to match the sophistication of the threats the sector faces.

Keywords: Social Engineering; Human Firewall; Cybersecurity; Phishing; BEC; Deepfake Attacks; AI-Augmented Threats; Corporate Security; Behavioural Science; Security Awareness; Pakistan Cybersecurity; Zero Trust

References

Amazon Q1 2026 Earnings Release (April 29, 2026) · CNBC · GeekWire · Yahoo Finance · Digital Commerce 360 · AWS Official Blog