Optimized Payments Study Finds Governed Payments Data Can Lift AI Accuracy from 5% to 98%

New "Data Tax" research shows structured data, agreed definitions and governed analytical tools can improve AI accuracy while reducing cost and response time

ATLANTA, GA, UNITED STATES, September 25, 2026 /EINPresswire.com/ -- Optimized Payments today released The Data Tax, a new whitepaper examining why enterprise AI can produce fast, confident, but incorrect answers when working with complex payments data, and what organizations can do to improve accuracy, speed, and cost.

Using the same AI model across 80 pre-registered payments questions, the study found that only 5% of questions met the study's success criteria when the model worked from raw payments data with code access. At the highest level of data readiness—where standardized data, agreed business definitions, and governed analytical tools were in place—98% of questions met the success criteria. At the same time, model cost per question fell from $0.90 to $0.14, while average response time dropped from 61 seconds to 15 seconds.

The study calls this gap the Data Tax: the cost AI pays in tokens, dollars, time, and wrong answers when the data behind a question is not ready for reliable reuse.

"The biggest takeaway is that AI accuracy is not simply a model problem—it is a data and governance problem," said Anand Goel, CEO of Optimized Payments. "If the underlying data is fragmented, definitions are inconsistent, or the model is left to recreate important calculations every time, the answers can be fast and confident—but still wrong."

Structured Data Helps. Definitions and Governed Calculations Make the Difference.

The study found that structuring and standardizing data materially improved efficiency but produced only a modest improvement in accuracy on its own.

Moving from structured tables to a curated semantic layer reduced cost per question from $1.10 to $0.47 and reduced average response time from 40 seconds to 18 seconds, while accuracy improved from 6% to 21%. Adding agreed business definitions raised accuracy to 53%. Enforcing those definitions through governed, tested analytical tools increased accuracy to 98% while reducing cost per question to $0.14.

Together, definitions and enforcement accounted for 76 of the 93 percentage points of accuracy improvement measured in the study.

One of the study's most significant findings was that better-structured data can make AI appear more capable before it becomes more reliable. At the semantic-layer stage, the AI returned a numeric answer for 97% of questions, yet 80% of all numeric questions produced a wrong number without an explicit warning.

"The most dangerous AI answer is not 'I don't know.' It is a plausible number that looks right but is based on the wrong definition," Goel said. "Enterprise AI needs more than access to data. It needs trusted data, agreed definitions, and calculations that can be applied consistently."

Why This Matters for Finance and Payments Leaders

Payments is a particularly demanding environment for enterprise AI because many large merchants operate across multiple processors and acquirers, each with different file formats, field names, and fee structures.

Many of the metrics finance and payments teams manage, including effective rate, downgrade rate, authorization decline rate, interchange savings, and dispute rate, are calculated metrics that depend on agreed definitions and business rules rather than values that simply appear in a processor file.

The study recommends a practical sequence for organizations adopting AI:

Structure the data. Agree on the definitions. Enforce the calculations.

Rather than attempting to prepare an entire enterprise at once, the whitepaper recommends starting with one high-value business question or workflow, identifying where the Data Tax is being paid, and measuring whether answer quality, model usage, and human effort improve as the underlying data is prepared.

Download the Whitepaper
The Data Tax: What Unready Data Costs Enterprise AI, and How to Stop Paying It includes the complete methodology, findings, worked examples and recommendations for finance, payments and technology leaders.

Download The Data Tax whitepaper here

About the Study
Optimized Payments tested 80 pre-registered questions across authorization, fees, sales, interchange and disputes using one enterprise merchant, two acquirers and a two-month data

window. The same AI model, question wording and grading methodology were used as data readiness changed across the primary comparison levels. Optimized Payments authored the study and builds and sells products represented in the higher-readiness levels; full limitations and disclosures are included in the whitepaper.

About Optimized Payments
Optimized Payments is a global leader in AI-enabled payment analytics, empowering businesses with actionable insights for smarter decisions. The company has helped merchants save $2+ billion in card processing fees, improve authorization rates, and streamline back-office operations such as reporting, reconciliation, and chargeback management. With a distinguished team of industry veterans and a comprehensive suite of solutions, Optimized Payments delivers unparalleled analytics and expertise to merchants and payment facilitators worldwide.

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