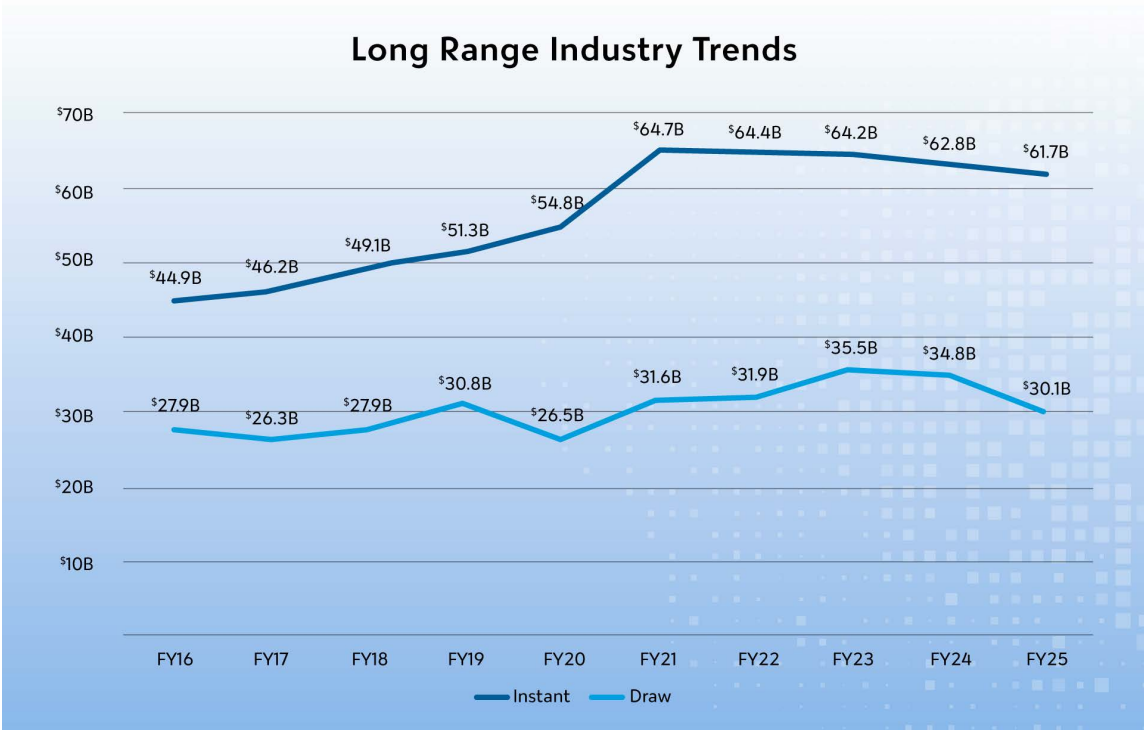




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Turning Data into Action: Powering Lottery Growth Through Market Basket Analysis

In a retail environment filled with competition for consumer attention — and wallets — every moment at the point of sale is critical. Players’ attention and spending are now divided among sports betting, “gray machines,” and a growing range of entertainment options. Combine that with the anonymity of a mostly cash lottery business, the lack of known player data from brick and mortar transactions, and fragmented retail systems, and it’s clear why understanding player behavior has long been a challenge.



To stay competitive, lotteries are turning to market basket analysis — a data-driven method already proven in other industries — to reveal how products are purchased together and what those relationships say about player decision-making. When combined with advanced analytics and machine learning, this approach is giving lotteries new visibility into retail performance and opportunities for growth.

What Retail Leaders Have Known for Decades

The idea behind market basket analysis isn't new. In 1993, researchers studying grocery store data discovered that 90% of transactions, including bread and butter, also included milk¹ — a simple but powerful finding that changed how retailers viewed product relationships.

Since then, large-scale retailers like Wal-Mart, Shell, Wawa, and Family Dollar have used market basket analysis to improve store layouts, refine promotions, and increase sales. Amazon filed its first patent for its recommendation engine in 2001², forever changing how customers discover new products.

For lotteries, applying this proven method has historically been much harder. Cash transactions, privacy restrictions, and disconnected systems left limited visibility into what players were buying or why. Sales data existed, but in fragments — useful for balancing books, not for understanding behavior

The Shift: From Anonymous to Insightful

That picture is changing quickly. Modernized self-service machines, connected retail ecosystems, and improved access to transaction-level data are now making it possible for lotteries to see purchasing patterns that were invisible just a few years ago.

With these tools in place, lotteries can analyze how players move between products and price points, identify product relationships, and uncover portfolio gaps. Market basket analysis provides a way to turn billions of transactions into clear, actionable insights that can guide retail strategy.

Market Basket Analysis in Action

Through advancements in technology and analytics, lotteries are gaining a clearer view of player behavior than ever before.

Scientific Games' *GameChoice*⁺ — an AI-powered product recommendation engine for vending, and SCiQ⁺, an integrated retail ecosystem — are fueling this new level of

insight. Together, these technologies capture hundreds of millions of purchase events annually, turning everyday transactions into data that helps guide lottery strategy.

In one jurisdiction, analysis revealed that 48% of sales come from multi-game baskets and 32% of baskets include different games. Players who buy multiple games tend to spend more per visit, and that additional spend represents incremental growth — not substitution. By understanding those patterns, lotteries can explore opportunities to adjust their bundling strategies, leading to higher average order value and fewer out-of-stocks.



In another U.S. market, data showed that extended play scratch games like Bingo and Crossword not only performed well individually but also drove cross-play between lower- and mid-priced games. At higher price points, however, no comparable extended play option existed. Recognizing that gap led to the launch of a \$10 Bingo game that was missing from the product mix — meeting existing player demand and improving overall retail performance.



The Bigger Picture

Technologies like *GameChoice* and *SCiQ* are part of a broader trend: lotteries using data science to better understand player behavior at retail. Machine learning and market basket analysis are not replacing intuition — they're enhancing it. By revealing how products interact in real-world shopping decisions, they help lotteries refine their portfolios, align games with player preferences, and improve both engagement and revenue.

Final Word

Market basket analysis is more than a research tool — it's a way to connect the dots between products, players, and performance. As data access expands and retail technology evolves, lotteries are positioned to make more informed decisions about product mix, placement, and promotion.

The result? A clearer picture of how players buy, and new opportunities to grow responsibly in a competitive marketplace.

**To learn more about SCiQ and GameChoice,
reach out to your SG representative.**

+GameChoice, an AI-powered product recommendation engine for vending, uses real-time market basket data to tailor dynamic product recommendations at PlayCentral self-service lottery machines. The innovation behind GameChoice is a first for the lottery industry, providing a player-level understanding of purchase decision-making powered by AI and SG Analytics.

++SCiQ, an award-winning retail ecosystem, provides lotteries and retailers with real-time, store-specific purchasing analytics, along with streamlined inventory management and reporting, locked bins for product security, and modern digital menu boards.

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2. Amazon: The Chronicles of a Personalization Giant, www.dynamicsyield.com/article/amazon-recommendations
3. *Infuse*™, Scientific Games' Business Intelligence Platform

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