

Striking the Balance Between Agile Innovation and PR Risk Control: Empowering FMCG Product Blind Testing with Synthetic Data

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The FMCG market in Taiwan is currently riding a wave of dramatic transformations.

From the high-protein and functional ingredient craze sweeping the food and beverage sectors in recent years to all kinds of novel flavor profiles and cross-brand collaborations, consumer novelty-seeking cycles are shortening at an astonishing speed. To maintain shelf relevance, brand owners must constantly pursue innovation, capturing emerging demands and launching new products as swiftly as possible.

However, accompanying this fast-paced innovation is an unprecedented level of PR risk.

With the rapid rise and widespread adoption of decentralized social platforms—especially the recent surge of Threads among Taiwanese consumers—the transmission pathways of product word-of-mouth have been radically rewritten. Any mismatch in the actual product experience—whether overly cloying sweetness, an overpowering aftertaste from artificial sweeteners, jarring synthetic flavors, or poor packaging design—can trigger viral backlash within a matter of hours, escalating into a full-blown PR crisis trending across the internet. According to long-term statistics from Harvard Business School and the Product Development and Management Association (PDMA), up to 70% to 80% of new consumer products introduced to the market each year fail within their first year, with nearly half of those failures stemming from insufficient pre-market testing and vague audience targeting. In an era where social media sentiment is nearly transparent in real time, if brands rush out insufficiently validated prototypes merely for speed, the ensuing customer complaints, unsold inventory, and damage to brand equity will carry costs that far outweigh initial R&D expenditures. Brands are trapped in a dilemma: striving to stay agile and continuously introduce new offerings, while simultaneously needing to ensure an entirely flawless physical consumer experience.

Faced with steep physical testing costs and lengthy turnaround cycles, balancing speed with risk control has become a pivotal imperative.

Ipsos' latest white paper, *The Power of Product Testing with Synthetic Data*¹, points out that applying “Synthetic Data” for “Data Boosting” provides an innovative solution to break through the bottlenecks of traditional product blind testing.

Traditional physical home-use tests (HUT) often consume substantial resources due to small-batch prototype manufacturing, blinded packaging, cold-chain and ambient logistics, and stringent recruitment criteria for niche target audiences. If scientific models can reduce the human sample size required for blind testing, enterprises can achieve multiple agile iterations within limited budgets and timelines. Research from authoritative international market research and technology institutions also corroborates this trend. Gartner predicts that by 2030, up to 80% or more of the data used for AI decisions and model training will consist of synthetic data; the international market research organization ICC/ESOMAR has also officially incorporated synthetic

data into industry research and ethical codes, affirming its legitimate value in boosting research agility and augmenting datasets. However, as underscored by the Harvard Business Review and various cutting-edge market research validations, relying purely on off-the-shelf Large Language Models (LLMs) to generate virtual respondents presents structural blind spots when addressing high-stakes commercial decisions involving multi-sensory human experiences. The industry's best practice should be a human-centric "Blended Approach".

This insight precisely aligns with the technological pathway advocated by Ipsos.

Product experience is inherently a holistic synthesis of five senses, emotional perceptions, and contextual usage. An AI algorithm has never tasted the texture of a protein drink or smelled a beverage's aroma, nor can it simulate out of thin air the authentic emotional responses of consumers. Therefore, Ipsos firmly opposes entirely replacing humans with AI. Instead, it advocates using "rigorously quota-controlled real consumers" as a Seed Sample, coupled with non-LLM Deep Learning algorithms trained specifically on numerical statistical distributions, to generate large-sample synthetic respondents and construct a hybrid dataset.

Common generic text-based LLMs lack respondent-level numerical distributions for specific categories and harbor inherent cultural biases and recency lags, making them ill-suited for rigorous numerical testing. Dedicated deep learning models, conversely, can precisely mirror the mean values, variance distributions, and multi-variable correlations of authentic seed samples. Backed by rigorous retrospective analysis and empirical validation across 185 CPG products and 40,000 respondents worldwide, Ipsos demonstrated that as long as the performance gap between products reaches 8% or more, 50 quota-controlled human respondents are sufficient to replicate 80% of the product rankings observed in large samples. Furthermore, after boosting the sample size with synthetic data, the mixed sample not only closely matches an "all-human 200 sample" in product preference rankings, attribute correlations, and answer choice distributions, but it also achieves 100% alignment in the final business decisions across all tested categories. This data-boosting technique effectively remedies the low statistical power inherent in small 50-person samples, significantly enhancing analytical sensitivity for niche sub-segments (such as heavy fitness enthusiasts or specific competitor brand users) and ensuring subtle preference variations within target groups are not overlooked due to sample sparsity.

In the social media era, product competitiveness is built on "speed," but brand longevity is anchored in "stability".

By integrating high-standard human seed blind testing with dedicated synthetic data boosting, Taiwanese FMCG brands no longer have to make painful trade-offs between costly large-scale physical blind tests and the looming risk of social media backlash. This model empowers product development teams to screen out potential pitfalls early, frequently, and cost-effectively—ensuring that every innovation brought to market balances trendsetting buzz with robust, genuine consumer endorsement.

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Endnote

i Ipsos. (2025). The power of product testing with synthetic data: Humanizing AI, part 2.
<https://www.ipsos.com/en/humanizing-ai-2-the-power-of-product-testing-with-synthetic-data>