# Revolutionizing Test and Learn with Synthetic Controls

In today's competitive business landscape, brands must frequently implement new business and marketing interventions to address changing market trends, customer preferences or competitor activity and stay ahead of the curve. These interventions may include changes in products or services, pricing, discounts, advertising channels, positioning and messaging. While such interventions have the potential to improve Key Performance Indictors (KPIs) like sales, they can be time-intensive and expensive – especially if they are region-wide or country-wide initiatives. More importantly, there is also the possibility that may not produce the desired or expected impact for the business.

# Why Test and Learn?

Test and Learn, also referred to as In-Market Testing or Lift Experiments, is an analytical technique that allows companies to test the impact of planned marketing or business interventions on a smaller and more cost-effective scale. They can then use the learnings and results to take informed, data-based decisions on rolling out these initiatives more widely across their different markets or customer segments.

While there are different Test and Learn methods like Matched Panel Analysis, A/B Tests and Randomized Controlled Trials that companies can use, the Matched Panel methodology is perhaps the most preferred to generate a comprehensive analysis of the impact of planned business interventions. This method matches a set of control markets or stores to test markets or stores and runs tests to quantify the impact of new initiatives. The results in test markets are compared with the results in control markets, where no intervention is done. A critical but challenging factor for accurate results is the choice of controls, which need to be as similar as possible to test markets vis-à-vis sales, market trends, customer demographics, category dynamics, macro factors etc. Identifying a good control is often difficult. This is where the transformative concept of Synthetic Controls comes in.

**Test and Learn (or In-Market Testing) allows companies to test the impact of planned business interventions on a smaller, cost-effective scale and use the results to take data-based decisions on rolling these out widely across different markets or customer segments.**

# Synthetic Controls

The Synthetic Controls methodology enables causal analysis of economic and social questions even when 'ideal' controls don't exist. It combines different imperfect control candidates with appropriate weights to create a 'composite' control. The composite control aims to match the test as closely as possible in terms of customer response, trends, KPIs etc. and enables accuracy and feasibility of In-Market Testing when ideal controls are hard to find. Simply put, it makes it very easy to find the perfect control.

Using Synthetic Controls has another important advantage. While previously, companies and brands had to first identify the right control before planning a test, they can now run limited campaigns and interventions as and when needed and decide on a control post-facto by combining and weighting different control candidates using synthetic control algorithms. This gives them the freedom and flexibility to run in-market tests even after the interventions and campaigns have been executed.

With increasing privacy regulations and restrictions having reduced the efficacy of popular measurement practices like attribution in recent years, advancements such as Synthetic Controls now make it easier for brands to leverage In-Market Testing to measure the effectiveness of their marketing campaigns and interventions.
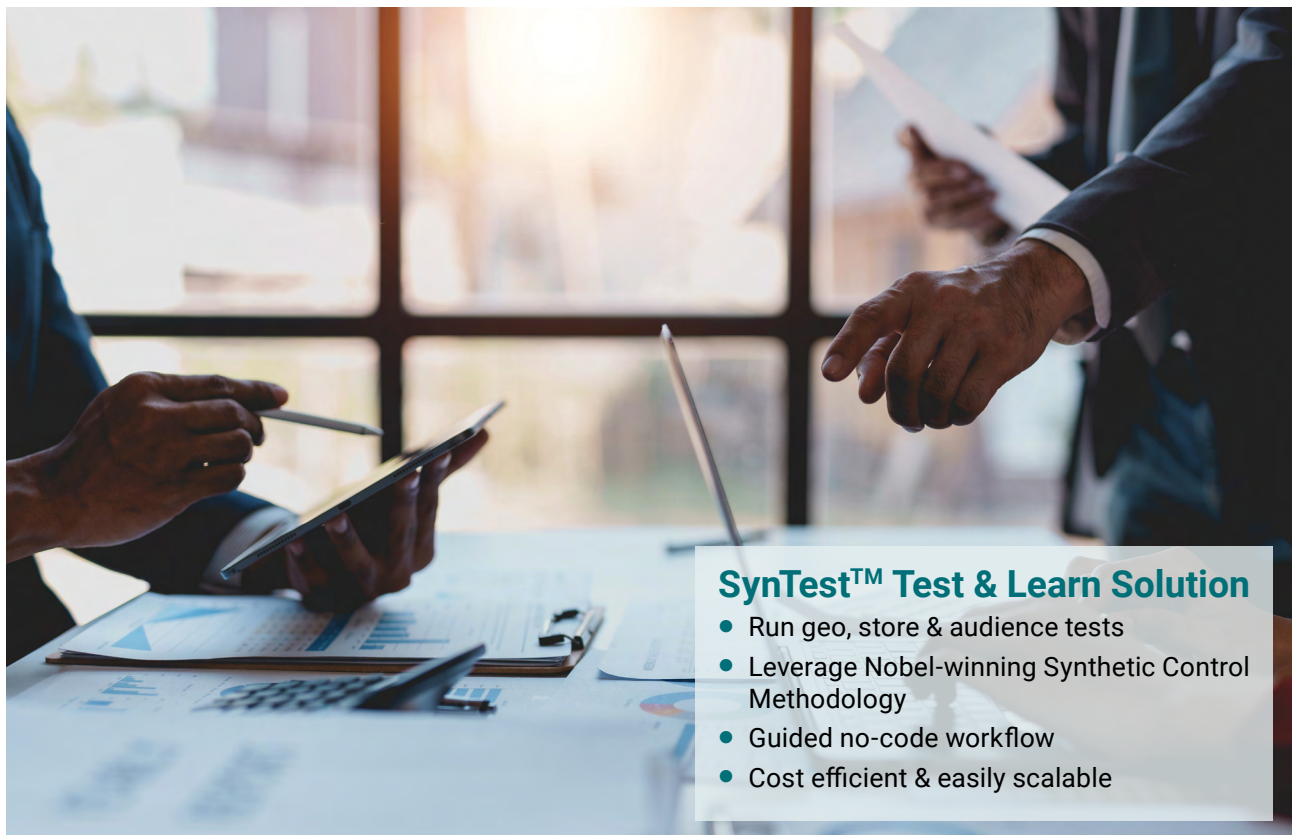
## What are Synthetic Controls?

Nobel-winning Synthetic Controls methodology enables Test & Learn or In-Market Testing even when 'ideal' controls don't exist. It combines different imperfect control candidates with appropriate weights to create a 'composite' control that matches the test as closely as possible .

## Advantages of Synthetic Controls

- Makes it easy to establish the perfect control
- Accurate in-market testing even when ideal controls are hard to find
- Freedom to run in-market tests post-facto after executing campaigns

# Combining Testing & MMM for Improved Accuracy

While Test and Learn is valuable in itself to measure the impact of individual campaigns or business drivers, it can also be a powerful tool to improve the results of Market Mix Modeling (MMM) studies. MMM examines how a large number of variables impact sales and helps brands understand which marketing channels or drivers are delivering incremental value. Brands can run in-market tests for a few channels and compare the ROI results to validate MMM findings, and if necessary calibrate the model for improved accuracy and precision of MMM insights.

## SynTest™ Test & Learn Solution
- Run geo, store & audience tests
- Leverage Nobel-winning Synthetic Control Methodology
- Guided no-code workflow
- Cost efficient & easily scalable

# Analytic Edge SynTest™

Analytic Edge brings these latest advancements in testing to SynTest, a simple, easy-to-use, cloud-based SaaS Test and Learn platform. SynTest enables companies to test the effectiveness of their advertising campaigns, promotions, pricing or any other business drivers. Based on Synthetic Controls methodology for accuracy and improved feasibility when ideal controls for tests are hard to find, it offers a guided, no-code workflow, from data ingestion all the way through test design and analysis. It supports multiple use cases such as geo-testing, audience testing, lead market tests, store testing and MMM cross-validation and includes integrated test quality and QA tools, enabling better confidence and accessibility to more users. With both in-house deployment and full-service options, the SynTest SaaS solution can be leveraged by companies across verticals such as CPG, retail, e-commerce, travel and leisure, F&B and many others to quickly and accurately evaluate the impact of planned market interventions.

# ANALYTIC EDGE
SHARPER INSIGHTS

## About Analytic Edge

Analytic Edge is a global analytics company that leverages technology and advanced analytics to help companies make data-based marketing decisions. The company's flagship platform Analytic Edge Qube offers a suite of marketing analytics solutions with a Software as a Service (SaaS) model. The solutions include DemandDrivers™ for always-on Marketing Mix Modeling (MMM), SynTest™ for AI powered Test and Learn, PriceSense™ for pricing and promotion analytics, and PowerView™ for analytics visualization. Analytic Edge works with clients across industry verticals such as e-commerce, mobile apps, gaming, consumer packaged goods, retail, automotive and many others. The company has offices in Singapore, India, US, Mexico, Brazil, UK, China, Japan, South Korea, UAE and Australia.

**Offices**

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