FROM COMPAIGNS TO SYSTEMS: RETHINKING MARKETING EFFECTIVENESS

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Abstract: *Marketing effectiveness research has historically privileged the campaign as the primary unit of analysis, resulting in measurement practices that are tactical, channel-bound, and oriented toward short-term performance metrics. Yet evidence from market dynamics research demonstrates that many markets display long-run equilibrium properties in relative competitive positions even as absolute sales and marketing expenditures evolve, suggesting that campaign-level perturbations may be transient and that durable competitive advantage depends on system-level capabilities (Dekimpe & Hanssens, 1995). This article advances a systems perspective on marketing effectiveness that reframes measurement as an ongoing governance problem encompassing data architecture, model validation, experimental calibration, and adaptive decision rules rather than as episodic evaluation of isolated initiatives. The synthesis demonstrates that under conditions of identity fragmentation and platform opacity, campaign scorecards increasingly confound signal and noise, making system architecture and continuous calibration mechanisms central research objects.*
Keywords: *marketing effectiveness, systems thinking, incrementality, marketing mix modeling, attribution, causal inference, dynamic capabilities, organizational learning.*

ОТ КОМПАНИЙ К СИСТЕМАМ: ПЕРЕОСМЫСЛЕНИЕ ЭФФЕКТИВНОСТИ МАРКЕТИНГА

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Аннотация: *в исследованиях эффективности маркетинга исторически приоритет отдавался кампании как основной единице анализа, что приводило к тактическим, привязанным к каналам и ориентированным на краткосрочные показатели эффективности методам измерения. Однако данные исследований динамики рынка показывают, что многие рынки демонстрируют долгосрочные равновесные свойства в относительно конкурентных позициях, даже несмотря на изменение абсолютных объемов продаж и маркетинговых расходов, что предполагает, что возмущения на уровне кампании могут быть временными, а устойчивое конкурентное преимущество зависит от возможностей на системном уровне (Dekimpe & Hanssens, 1995). В данной статье предлагается системный подход к эффективности маркетинга, который переосмысливает измерение как непрерывную проблему управления, охватывающую архитектуру данных, проверку моделей, экспериментальную калибровку и адаптивные правила принятия решений, а не как эпизодическую оценку отдельных инициатив. Синтез показывает, что в условиях фрагментации идентичности и непрозрачности платформ показатели эффективности кампаний все больше смешивают сигнал и шум, делая архитектуру системы и механизмы непрерывной калибровки центральными объектами исследования.*
Ключевые слова: *эффективность маркетинга, системное мышление, инкрементальность, моделирование маркетингового микса, атрибуция, причинно-следственная связь, динамические возможности, организационное обучение.*

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Introduction

The fundamental paradox confronting contemporary marketing effectiveness research is that organizations now optimize with unprecedented tactical granularity while simultaneously experiencing progressive erosion of observational visibility into consumer behavior due to privacy regulation, platform data restrictions, and identity fragmentation across devices and contexts (Hosahally et al., 2025). Under these structural conditions, the traditional conceptualization of effectiveness as a campaign scorecard problem becomes progressively less theoretically and empirically credible, because the very data streams that render campaigns legible in real-time dashboards are precisely those most severely affected by reduced user-level observability, cross-channel journey fragmentation, and platform self-attribution biases.

A systems view of marketing effectiveness begins from a fundamentally different premise: effectiveness is not an attribute of discrete interventions but rather an emergent property of interconnected organizational

processes that include environmental sensing, hypothesis formation, resource allocation decisioning, tactical execution, outcome measurement, and continuous learning, each constrained by data governance structures and measurement validity requirements (Wilden et al., 2015). The classical empirical evidence on market evolution patterns reinforces this premise by demonstrating that evolutionary dynamics dominate for sales and marketing expenditure series but stationarity dynamics dominate for market share series, supporting the theoretical proposition that many competitive markets operate around long-run equilibrium conditions where relative competitive positions are only temporarily disturbed by marketing actions before reverting toward equilibrium states (Dekimpe & Hanssens, 1995).

The practical response to these structural constraints has been a documented shift from single-model dependence toward measurement triangulation frameworks that combine marketing mix modeling, multi-touch or platform attribution signals, and incrementality experiments, with incrementality testing increasingly recognized as uniquely capable of providing causal validation in post-cookie measurement environments. The theoretical implication of this triangulation imperative is profound: marketing effectiveness can no longer be reliably inferred from any single measurement approach but rather requires architecting complementary measurement components into an integrated system where experiments periodically calibrate observational models, aggregate time-series methods provide strategic allocation guidance, and high-frequency attribution signals enable tactical optimization between experimental calibration points.

The organizational architecture integrating data pipelines, statistical models, experimental protocols, optimization algorithms, and execution mechanisms into closed-loop governance structures constitutes the appropriate analytical focus for effectiveness research under contemporary conditions (Nelson & Winter, 1982). Inferential quality originates in the joint design of data collection, model estimation, experimental validation, and decision rules institutionalized as organizational routines, not in isolated model families or metrics. Sustainable competitive advantages in effectiveness trace to organizational routines enabling superior system design through routinized processes: sensing market dynamics with accuracy, testing causal hypotheses rigorously, extracting generalizable knowledge systematically, reconfiguring resource allocations continuously (Wilden et al., 2015; Teece, 2007). Patterned sequences of learned behavior involving multiple organizational actors constitute these routines, translating measurement systems from data into decision-relevant knowledge and competitive advantage (Nelson & Winter, 1982).

Methods

This study employs an integrative conceptual synthesis methodology that combines two complementary evidence streams to develop a systems framework for marketing effectiveness. The first stream draws on foundational empirical generalizations regarding long-run market dynamics, specifically the well-documented tendency for sales and marketing expenditure series to exhibit evolutionary behavior while market share series exhibit stationary behavior around equilibrium levels (Dekimpe & Hanssens, 1995). This asymmetry between absolute and relative performance dynamics provides theoretical motivation for why marketing effectiveness must be evaluated across multiple time horizons and why equilibrium reversion tendencies can mask or misrepresent the lasting competitive value of marketing interventions when those interventions are assessed exclusively through short campaign windows.

The second evidence stream consists of recent empirical and methodological scholarship addressing marketing measurement under privacy regulation and identity fragmentation, with particular focus on work that explicitly contrasts and integrates marketing mix modeling, attribution approaches, and incrementality testing. This contemporary measurement literature documents specific validity threats created by GDPR implementation, third-party cookie deprecation, and platform tracking restrictions, providing empirical grounding for claims about the declining reliability of campaign-level observational attribution and the corresponding increased importance of experimental calibration. Analytically, the synthesis treats different measurement approaches as specialized components within a larger system of marketing inference and control, each with characteristic strengths and validity constraints. Marketing mix models are interpreted as system-level estimators that operate on aggregated time-series variation across channels, sacrificing tactical granularity in exchange for reduced dependence on individual-level identifiers and ability to incorporate offline media and environmental covariates (Hosahally et al., 2025). Multi-touch attribution models are interpreted as high-frequency diagnostic signals that provide tactical visibility but are structurally fragile under data fragmentation because they require comprehensive journey observation and are vulnerable to self-attribution biases when platform-provided. Incrementality experiments, including randomized controlled trials and geo-experiments, are interpreted as causal calibration mechanisms that can validate and correct biases in observational components when identity-level tracking is constrained or when selection effects confound observational estimates (Lewis & Rao, 2015).

Results

The integrative synthesis yields three substantive results regarding how marketing effectiveness should be reconceptualized when analytical focus shifts from evaluating individual campaigns to governing measurement and decision systems. Each result addresses a specific dimension of the campaign-to-system transition:

measurement validity under data constraints, the governance role of experimental calibration, and the necessity of long-run equilibrium modeling for strategic effectiveness inference.

Campaign-level metrics increasingly confound true causal signal with spurious correlation and systematic bias under contemporary data conditions. Privacy regulation including GDPR materially reduces data granularity and fragments observational data sources, making it structurally difficult to obtain comprehensive cross-channel views of consumer behavior and limiting the interpretability of platform-specific attribution outputs that cannot observe competitive platform touchpoints (Hosahally et al., 2025). The deprecation of third-party cookies and implementation of app tracking transparency frameworks create systematic observational gaps in consumer journeys, particularly for cross-device and cross-platform paths, which represent an increasing proportion of conversion journeys as consumers distribute attention across multiple screens and contexts. The consequence is that apparent precision in campaign dashboards can coexist with declining causal validity. Platform self-attribution mechanisms, which assign conversion credit based exclusively on within-platform touchpoint exposure, systematically overstate platform effectiveness when consumers have been exposed to marketing across multiple platforms, because these mechanisms cannot observe or adjust for extra-platform exposures. Similarly, last-touch attribution conventions, which remain common despite known limitations, systematically undervalue upper-funnel awareness and consideration activities that occur earlier in consumer journeys but are causally important for enabling lower-funnel conversion activities.

Experimental evidence confirms these attribution biases are substantial. Studies comparing observational attribution estimates to randomized experiment results consistently find that observational methods overestimate advertising causal effects by large margins, sometimes by factors of 10 or more, because they fail to account for selection effects whereby consumers who would have purchased anyway are disproportionately likely to be exposed to advertising (Lewis & Rao, 2015). The fundamental identification problem is that observational attribution conflates two distinct phenomena: consumers who purchase because of advertising exposure and consumers who purchase and were exposed to advertising but whose purchase was causally independent of that exposure. Experimental randomization breaks the confound by ensuring exposure is independent of purchase propensity, enabling clean causal inference.

From a systems perspective, this measurement validity crisis implies that campaign evaluation cannot rely exclusively on observational dashboards but must integrate experimental calibration to correct for systematic biases. Organizations that continue to optimize based exclusively on platform self-attribution signals or uncalibrated observational models risk systematically misallocating resources toward channels and tactics that appear effective in dashboards but do not produce incremental outcomes in experiments.

A systems approach clarifies why marketing effectiveness must be governed through periodic calibration cycles rather than inferred once from observational data. Incrementality experiments, encompassing randomized controlled trials, geo-experiments, and matched-market tests, provide rigorous causal inference by explicitly constructing counterfactual comparison groups that enable estimation of incremental outcomes attributable to marketing interventions (Hosahally et al., 2025). These experimental methods have become increasingly central to marketing measurement post-GDPR because they can validate whether observed correlations in marketing mix models and attribution tracking correspond to true causal effects or reflect spurious correlation and selection bias.

Long-run market structure evidence implies that marketing effectiveness cannot be fully captured by short-run lift measurements. Dekimpe and Hanssens (1995) demonstrate that market share series are significantly more likely to exhibit stationarity than sales and marketing expenditure series across a wide range of product categories and competitive contexts. This asymmetry implies that competitive positions tend to revert toward equilibrium even when absolute market sizes grow and marketing expenditures increase, consistent with theoretical models of competitive equilibrium where sustained position changes require sustained investment changes or capability advantages.

From a systems perspective, this long-run evidence suggests that sustainable marketing effectiveness depends less on the strength of individual campaign responses and more on organizational capabilities that enable sustained learning and adaptation at rates faster than competitors. If market share tends toward stationarity, then maintaining superior positions over extended periods requires not just executing effective campaigns but institutionalizing systems that continuously sense competitive dynamics, test new approaches, learn from outcomes, and adapt resource allocations faster than competitors can respond (Wilden et al., 2015).

Discussion

The transition from campaign-level to system-level effectiveness analysis surfaces three unresolved theoretical tensions in contemporary marketing measurement scholarship. Each tension reflects fundamental tradeoffs that organizations confront when designing measurement architectures under conditions where privacy regulation constrains observational data and economic feasibility limits experimental coverage.

The hierarchical measurement architecture proposed here positions experiments as periodic calibration mechanisms that correct bias in observational models (Hosahally et al., 2025). This architecture assumes experimental results generalize across contexts sufficiently to calibrate models applied in different times,

geographies, and channels. However, systematic evidence documents substantial external validity constraints on advertising experiments. Lewis and Rao (2015) demonstrate that statistical power requirements for precise effect estimation often exceed hundreds of thousands of observations and hundreds of thousands of dollars in advertising expenditure, inherently limiting experimental frequency and coverage. When experiments are conducted sporadically, the question emerges: how rapidly does calibration decay as market conditions evolve between experimental periods? Existing scholarship provides limited guidance on optimal experimental portfolio allocation. Vaver and Koehler (2011) demonstrate geo-experiments can measure aggregate advertising effectiveness at the designated market area level, but their analysis does not address how results from one geographic market and temporal period transfer to others. Sahni et al. (2018) show that field experiments in email marketing reveal heterogeneous treatment effects across consumer segments, implying calibration factors may not transfer uniformly across contexts. Blake et al. (2015) find that brand search advertising effectiveness differs dramatically between branded and non-branded keywords, suggesting channel-level heterogeneity further complicates calibration transfer.

The fundamental research gap concerns developing formal frameworks for experimental portfolio optimization that account for both direct evaluation objectives and calibration value across multiple observational models. When experimental budgets are constrained, organizations must prioritize which channels, geographies, and time periods warrant experimentation based on decision leverage and prior uncertainty. Current practice resolves this allocation problem implicitly through political negotiation or opportunistic experimentation rather than optimally through formal decision analysis.

This identification problem connects to longstanding debates in industrial organization economics about whether advertising is primarily informative or persuasive (Schmalensee, 1972). If advertising functions primarily to inform consumers about product attributes and availability, effectiveness operates through expanding primary demand rather than redistributing market share. If advertising functions primarily as persuasive competition for share, effectiveness manifests through relative spending advantages rather than absolute levels. Nerlove and Arrow (1962) formalize this distinction through differential equations modeling advertising as investment in brand stock capital that depreciates over time, yet empirical implementation requires estimating depreciation rates and competitive response functions that are difficult to identify from observational time series.

Marketing mix models typically estimate marginal effects conditional on observed competitive spending, but if spending levels are endogenous to competitive dynamics, each firm optimizing against expectations of competitors' choices, estimated parameters confound offensive and defensive components (Hanssens et al., 2014). Structural econometric approaches could potentially decompose these effects by explicitly modeling competitive game-theoretic equilibrium, but such models require functional form assumptions about demand, cost, and equilibrium selection that are rarely empirically justified (Reiss & Wolak, 2007). Experimental methods provide cleaner causal identification but face their own external validity challenges in competitive contexts. When a firm conducts a geo-experiment reducing marketing expenditure in test markets while maintaining spending in control markets, competitors typically maintain national strategies, creating artificial local competitive asymmetries not representative of equilibrium dynamics. Whether experimental estimates of effectiveness measured under experimentally-induced competitive asymmetries generalize to equilibrium settings where all firms simultaneously adjust remains an open question.

Three theoretical contributions emerge from this analysis. First, measurement triangulation across marketing mix modeling, attribution, and incrementality experiments should be understood as epistemological necessity rather than methodological preference when observational data are structurally incomplete (Hosahally et al., 2025; Lewis & Rao, 2015). Second, organizational capabilities in measurement system design and implementation may constitute sources of competitive advantage only when accompanied by organization-specific complementary assets that competitors cannot easily replicate (Teece, 1986; Barney, 1991). Third, stationarity in market share combined with evolution in spending implies effectiveness has distinct offensive and defensive components that current measurement practice typically confounds (Dekimpe & Hanssens, 1995).

For research practice, these contributions suggest that future effectiveness studies should specify measurement apparatus alongside marketing interventions explicitly, because inferential validity depends jointly on stimulus design and measurement system design. Comparative studies examining how measurement system sophistication relates to sustained performance differences would test whether superior measurement capabilities translate to competitive advantage empirically. Methodological research developing formal approaches for optimal experimental portfolio allocation and for decomposing offensive versus defensive effectiveness would address identified gaps.

For organizational practice, the analysis implies that measurement system investments should be evaluated not by technical sophistication but by demonstrated impact on decision quality and competitive outcomes. Organizations should audit current measurement capabilities against the standards implied by triangulated systems architecture, identify capability gaps, and develop systematic development roadmaps rather than making opportunistic measurement investments in response to immediate crises or vendor sales cycles.

Conclusion

The theoretical synthesis and empirical evidence examined here establish that contemporary marketing effectiveness research must transition from campaign-level evaluation toward system-level analysis. Structural changes in data availability, platform transparency, and consumer behavior have degraded the validity of campaign scorecards while increasing the importance of measurement system architecture as a source of competitive advantage. Three core propositions support this transition: measurement validity depends fundamentally on system design rather than metric selection, experimental calibration constitutes ongoing governance rather than episodic evaluation, and long-run equilibrium dynamics necessitate conceptualizing sustainable effectiveness as continuous capability development rather than discrete campaign excellence.

The practical implication for organizations is that marketing effectiveness cannot be optimized through better campaign execution alone but requires simultaneous investment in measurement system infrastructure encompassing data integration, experimental capacity, statistical modeling, and organizational learning processes. The theoretical implication for researchers is that effectiveness should be studied as an emergent property of organizational systems rather than as an attribute of marketing stimuli, requiring joint specification of interventions and measurement apparatus in effectiveness studies.

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