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MARKETING BUDGET OPTIMIZATION: INCREASING ROI THROUGH FUNNEL EFFICIENCY AND STRUCTURAL IMPROVEMENTS

Summary. *With modern marketing structures more complex and data-rich than ever before, organizations are under growing pressure to optimize performance without adding the cost associated with doing so. Although there are many approaches that suggest that budget expansion is a primary driver of growth, emerging evidence is pointing out that inefficiencies within marketing systems mean that the return on marketing investment (ROMI) is often constrained. The Efficiency-Driven Marketing Optimization Model (EDMOM) as an analytical frame which the author developed serves to improve the performance of marketing with process and allocation optimization. Based on literature within the fields of marketing analytics, customer journey theory and omnichannel strategy, this study defines marketing inefficiency in terms of misallocation of resources as a product of misguided funnel dynamics. The model incorporates financial metrics such as CPL and CAC with funnel-based analytics to uncover structural inefficiencies and resource misallocation. Data to date suggests there exists a significant efficiency gap at transition stages in the funnel and fragmented omnichannel environments, thereby resulting in inflated acquisition costs despite stable lead generation performance. The study also adds to the literature by discussing a system-level strategy to marketing optimization, with higher ROMI generation by optimizing funnel*

efficiency and budget allocation at the same time while remaining in equilibrium with total marketing expenditure.

Key words: *marketing budget optimization, return on marketing investment (ROMI), customer acquisition cost (CAC), cost per lead (CPL), funnel efficiency, marketing analytics, A/B testing, omnichannel marketing, resource allocation, EDMOM framework.*

Introduction. Over the past 20 years, the rapid development of digital marketing has fundamentally transformed the way companies design, implement, and evaluate their marketing strategies. The advances in data analysis, automation, and omnichannel integration have widened the horizons of marketing, enabling firms to communicate with customers at multiple points and at increasingly fine scales. Now consumers can make instantaneous decisions, monitor and even assess such performance at greater granularity [1; 6]. However, this growth has also given new levels of complexity to marketing systems.

One of the major problems confronting today's organizations is that of marketing budget management under tightening cost constraints and performance expectations. Traditional marketing strategy development has tended to assume that higher costs mean better results, with budget magnitude implicitly regarded as the leading cause of gain in growth. But this is an assumption that is now being questioned. There is increasing empirical evidence that shows the relationship between marketing spend and performance to be neither linear nor predictable, especially when firms operate in structural inefficiencies and in fragmented processes [8].

The increasing prominence of marketing analytics has allowed companies to measure their performance much more specifically, through such measures as cost per lead (CPL), customer acquisition cost (CAC), and return on marketing

investment (ROMI) [9]. These metrics provide interesting data points, but they need to be interpreted in a coherent structural model of marketing spend for an organization to work. Consequently, organizations can concentrate on trying to optimize isolated indicators –such as reducing CPL alone – without knowing how this influences system-level performance.

Simultaneously, the complexity of customer behavior has also increased. Customers are no longer the purchase path driven consumers but rather involve themselves in dynamic multi-channel customer journeys in which they have repeated interactions online and offline [7; 19]. This complexity further complicates measuring performance (and budget distribution) because the impacts of marketing activities are propagated over various stages and contacts.

The shift to omnichannel marketing also adds to these challenges. As omnichannel initiatives promise seamless customer experiences, they must also accommodate multiple channels with different expenses and performance profiles [5; 10]. Absent successful integration, these systems may create redundancy and inefficiency, lowering the overall return on investment in marketing.

This paper contends that marketing performance should be considered primarily at the level of system efficiency, not at the expense of cost (See Figure 1). More specifically, it suggests that inefficiencies within the marketing funnel and resource allocation process are a main performance constraint. There is much more opportunity to improve outcomes by addressing these inefficiencies than building additional marketing budgets.

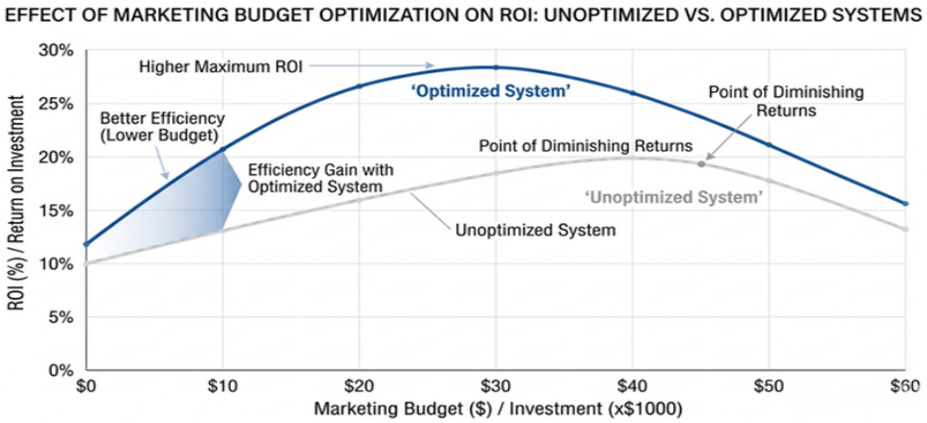

Fig. 1. Budget vs Efficiency: Non-Linear Relationship in Marketing Performance

We put this perspective into practice by introducing the Efficiency-Driven Marketing Optimization Model (EDMOM), developed by the author. The model synthesizes funnel dynamics, cost metrics, and optimization strategies into a single analytical approach which means that they could be used to look for structural inefficiency problems in marketing programmes.

The primary purpose of our study is to show funnel efficiency and budget allocation can be effectively optimized to improve ROMI without increasing total marketing expenditure. In this way, the study adds to theory as well as practice in the form of formalized method of marketing optimization, thus connecting financial metrics with process dynamics and customer behavior.

Literature Review

Marketing Performance Measurement and the Limitations of ROMI

The study of marketing effectiveness has focused on financial performance, with Return on Marketing Investment (ROMI) as the most-important indicator. ROMI represents the relationship between marketing spending and the revenue generated from these investments (Hanssens & Pauwels, 2016) to measure strategic ROI in decision making. Nevertheless, in practical application ROMI is limited due to the structural complexity of the marketing systems.

One of the prominent limitations of ROMI is that it rests on the need for attribution. With current multi-touchpoint interactions in the marketing world, it becomes increasingly challenging to isolate the importance of each marketing activity in order to separate the contribution [19]. Customers interact with more than one channel at a time across multiple channels and return to an earlier phase of the decision process, complicating the attribution of gains to specific projects. Consequently, ROMI calculations may not reflect the real performance drivers.

New research indicates that marketing analytics has the potential to help solve some of these challenges by bridging behavioral data with financial outcomes [1]. But analytics is effective only when it's embedded in a systematic overall framework instead of in a siloed bubble. In the absence of this integration, data-driven insights may be scattered and affect fewer strategic decisions [16].

We can see that this limitation calls us to move beyond just quantitative measures to incorporate structurally informed perspectives in performance assessment.

Marketing Analytics and Data-Driven Budget Allocation

The growth of marketing analytics has drastically improved the scale at which organizations collect, process, and interpret customer data. With these large datasets, as well as the use of analytical methodologies, companies can understand customer behaviour, preferences, and decision-making processes [6]. These capabilities have enabled better targeting and personalization efforts, driving a more effective marketing approach. Simultaneously, marketing analytics has been deemed a vital link from customer psychology to managerial decision-making [1].

The analytics process interprets behavioral insights into relevant strategies through which organizations can leverage marketing activities to recognize patterns of consumer behavior. Hidayati et al. (2024) emphasize the need for analytics as an integral part of digital marketing strategies, noting that it is essential for coping with

the complex landscape [9]. Other emerging methodologies, such as anomaly detection approaches based on multi-channel data, can identify marketing performance irregularities when inefficiencies occur across the channels they leverage [14].

Likewise, recent advances in methodology underscore the societal and strategic significance of marketing analytics, with a growing sense that this domain is applicable beyond the optimization of immediate performance outcomes [16]. Nevertheless, these advances highlight a major limitation in the literature: the lack of an interpretative framework for analytical outputs.

Data by itself is not enough to improve decision making. It is the ability to contextualize insights within the wider marketing system that determines their usefulness. Without this context, organizations may optimize individual components while overlooking systemic inefficiencies.

Customer Acquisition Costs, Funnel Dynamics, and Efficiency

Customer acquisition cost (CAC) has now become one of the most valuable measures in the evaluation of marketing efficiency, as it estimates the cost of converting a prospect into a customer. Cost per lead (CPL), a closely related metric, is also widely used. Such metrics dominate practice, yet they require a clear understanding of how the marketing funnel operates. Studies show that CAC is strongly impacted by inefficiencies within the marketing funnel. As customers move through each stage, drop-off rates and conversion inefficiencies increase the overall cost of acquisition [18].

It is important to note that a low CPL does not necessarily result in a low CAC. Inefficiencies in later stages of the funnel can offset any gains achieved during lead generation. The growing complexity of customer journeys further complicates this relationship. Unlike earlier linear models, customers now engage in iterative, non-linear interactions across multiple touchpoints [7]. This behavior introduces

variability at each stage of the funnel, making it more difficult to predict performance and allocate resources effectively.

Digital marketing theories have attempted to address these challenges by emphasizing inter-stage dynamics and more flexible funnel systems [4; 11]. However, these approaches are often applied to individual stages or subsets of the funnel rather than to the system as a whole. As a result, inefficiencies at transition points – such as the shift from awareness to consideration or from consideration to conversion – can generate substantial costs.

Omnichannel Complexity and Budget Inefficiencies

The shift from multichannel to omnichannel marketing brings new challenges in managing marketing budgets. Although an omnichannel strategy aims to provide unified customer experiences, it also requires coordination between channels with varying costs and performance [5]. This lack of integration has been identified as a major source of inefficiency. When channels operate in isolation, duplicate resource use and inconsistent messaging can occur, ultimately lowering overall effectiveness [10].

This fragmentation also negatively affects the customer experience, leading to suboptimal marketing budget allocation. These issues are especially visible in e-commerce environments, where the operational implications of inefficiencies become more pronounced. Pires et al. (2024) demonstrate that inconsistencies across digital touchpoints can significantly reduce customer satisfaction and conversion rates [17]. Similarly, Zhang et al. (2023) highlight the cost implications of misalignment in multichannel retail processes, particularly in relation to product returns and sustainability challenges [20].

These observations suggest that budget inefficiencies are often structural rather than simply related to the size of spending. Without an integrated approach

that aligns channels with customer behavior, organizations are likely to experience diminishing returns on their marketing investments.

Communication, Personalization, and Behavioral Influence

It is also important to consider the quality and consistency of communication strategies, as these contribute significantly to the effectiveness of marketing expenditures. Integrated marketing communications (IMC) have been shown to improve performance through alignment across channels and touchpoints [2]. However, implementing such integration in complex environments remains a significant challenge.

Personalization represents another key aspect of marketing effectiveness. Research on online advertising confirms that the timing, content, and context in which messages are delivered strongly influence their impact [3]. These findings highlight the importance of aligning marketing activities with customer behavior and suggest that efficiency can be enhanced through more precise targeting and messaging.

Customer responses to marketing stimuli are also deeply rooted in cognitive and emotional processes. Although still an emerging area within marketing efficiency research, studies on interoception and mental processing provide insight into how individuals perceive and react to stimuli [12]. These insights suggest that designing marketing strategies around human behavior may be more effective than relying solely on structural or financial considerations.

Emerging Technologies and Strategic Value Creation

Emerging technologies, such as artificial intelligence and blockchain, have been suggested as ways to improve marketing effectiveness and customer value. Smart agent technologies are capable of automating decision-making and enhancing efficiency when integrated in a cohesive system [13]. In a similar vein, blockchain-

based techniques have been recommended as a means to increase transparency and trust during marketing interactions [15].

Yet whether these technologies are successful depends on how they mesh with current processes. Without some structural integration, technological solutions might not produce the expected benefits, illustrating the importance of system-level optimization.

Synthesis and Research Gap

The aforementioned literature suggests significant advancements and evidence-based growth in marketing performance, customer behavior, and data-driven decision-making. However, it also reveals a structural weakness: the absence of a unifying framework that integrates financial metrics, funnel dynamics, and customer journey complexity in a consistent and coherent manner. Current methodologies often emphasize isolated components of marketing performance – such as analytics, customer experience, or budget allocation – without adequately considering their interdependencies.

As a result, organizations may focus on optimizing specific elements while overlooking systemic inefficiencies that constrain overall performance. This highlights the need for a structural approach to marketing budget optimization – one that combines performance metrics with process dynamics and customer behavior, rather than treating them as separate dimensions.

The purpose of this research is to address this gap by proposing the Efficiency-Driven Marketing Optimization Model (EDMOM), which conceptualizes marketing performance as a function of system efficiency rather than expenditure magnitude. By aligning budget allocation with funnel dynamics and customer pathways, the model aims to improve ROMI without increasing total marketing spending.

Methodology

Research Design and Analytical Approach

The study adopts a conceptual-analytical research design aimed at developing a structured model for marketing budget optimization grounded in efficiency principles. Instead of using primary empirical data, the study draws upon and integrates existing literature on marketing analytics, customer journey dynamics, and performance measurement in a systematic manner, along with a framework development approach.

The main methodological contribution is to introduce the EDMOM (Efficiency-Driven Marketing Optimization Model) suggested by the author. The model conceptualizes marketing performance as a function of efficiency in resource allocation within a funnel system that is structurally defined, rather than the magnitude of an expenditure.

Framework Structure: EDMOM

EDMOM is implemented as an integrated analytical model that combines financial metrics with process dynamics. The framework comprises three interdependent components (See Figure 2):

1. Funnel Efficiency Layer. This layer describes the structural movement of customers in the marketing funnel, moving between lead generation and conversion. Transition probabilities and associated conversion rates characterize the steps.

2. Cost Attribution Layer. Marketing expenditures are assigned to the funnel stages and touchpoints for better analysis of performance indicators, including:

   a. Cost per Lead (CPL)

   b. Customer Acquisition Cost (CAC)

   c. Stage-specific conversion costs

3. Optimization Layer. This layer assesses cost-effectiveness and resource allocation, and finds where there are inefficiencies. This particular focus is to identify structural leakage points, where disproportionate costs are incurred relative to conversion outcomes.

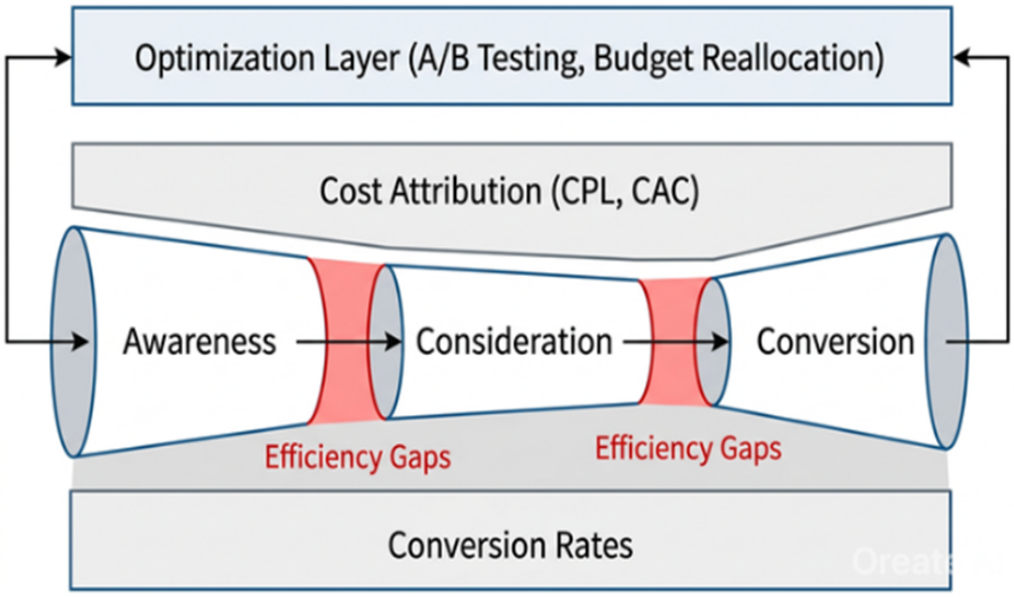

Fig. 2. Efficiency-Driven Marketing Optimization Model (EDMOM)

Analytical Procedure

Our analytical process proceeds in four steps:

1. Funnel Mapping. The marketing funnel is decomposed into discrete stages (e.g., awareness, consideration, conversion), with each stage associated with measurable inputs (costs) and outputs (conversion rates).

2. Cost–Performance Linking. For each stage, financial metrics are assigned that allow CPL and CAC to be calculated and for them to be distributed across the funnel.

3. Inefficiency Identification. This comparative analysis helps to identify discrepancies between resource allocation and conversion performance, highlighting areas of cost concentration and underperformance.

4. Optimization Simulation. Conceptually, we examine alternative allocation scenarios, such as reallocating budget from low-efficiency to high-impact stages, as well as the application of A/B testing to refine performance at critical points.

Research Results. The Efficiency-Driven Marketing Optimization Model (EDMOM) reveals an inherent trend of structural inefficiencies between marketing budget allocation and market success in the modern digital systems. These inefficiencies are not from over-expenditure but from a mismatch in the marketing funnel between resource allocation and real conversion dynamics. One key point is that resources are being allocated to high-funnel activities by over-prioritizing lead generation. While these investments typically bring a relatively favorable cost per lead (CPL) metric, their downstream customer acquisition effect is sparse.

Conversion rates drop dramatically when customers move along the funnel, resulting in rising costs to acquire customers (CAC) at the same time that CPL is flat or dropping. This discrepancy further demonstrates that, while the effectiveness of the early-stage is important, stage-level analysis is also critical, since performance and efficiency at an early stage of a customer acquisition process may not be uniform to overall system performance [18].

More detailed study on funnel dynamics also show the prevalence of cost concentration of the stage towards the transition zones between stages (that is, between consideration and conversion). This is a point at which customers are engaged, and the shift from interaction to decision-making is most pronounced, resulting in higher friction. Because of the apparent diminishing efficiency of the conversion at these stages, these process structures fall short, and hence, the costs in the process increase as output decreases.

The analysis also uncovered some fragmentation in budget allocation across channels in omnichannel-inspired settings. Resources are often spread between

platforms with insufficient coordination, leading to redundancy and inconsistent performance outcomes [5; 10]. Such fragmentation will both lower total effectiveness and make attributing performance metrics more cumbersome, which decreases data-driven initiatives.

While the marketing analytics helps show partial insight into these dynamics, without a structural framework, analytical outputs fall short of any contextualization in a business context. As organizations can track customer interactions and performance indicators, the lack of alignment between data and process architecture constrains the identification of underlying inefficiencies [1; 6].

From the EDMOM perspective, these patterns are described as an efficiency gap, characterized as differences between the resource input and the conversion output during various points of the funnel. The gaps are most evident at transition stages and in environments of high channel complexity (See Table 1). Crucially, from this analysis, it can be seen these inefficiencies are more general rather than individual, suggesting systemic rather than localized optimization should be pursued.

Table 1

Funnel Efficiency & Cost Structure

Funnel Stage	Cost Input Level	Conversion Rate (%)	Cost per Lead (CPL)	Customer Acquisition Cost (CAC) Contribution	Efficiency Assessment	Key Issue Identified
Awareness	High	100 → 45	Low–Moderate	Indirect	Moderate	Overinvestment in lead generation
Consideration	Medium	45 → 18	Moderate	Increasing	Declining	Transition inefficiency
Conversion	Low–Medium	18 → 6	High (relative)	High	Low	Under-optimized final stage

Discussion. Results obtained from this study are strong indicative that marketing performance is primarily influenced by the rational allocation of resources at the structural level of the marketing funnel. In contrast to general assumptions – such as that increased spending would achieve better results – the findings indicate that system inefficiencies are to a significant extent inhibiting marketing investment. This strengthens the case that marketing optimization is a matter of structural alignment and not budgeting.

A key implication of the analysis lies in the observed divergence between cost per lead (CPL) and customer acquisition cost (CAC). The fact that organizations may be inclined to focus on CPL reduction as a measure of efficiency, but that when taken in isolation might be misleading. Customer pathways are inherently complex and non-linear, as well as a combination of factors pushing your funnel [7; 19], as alluded to in previous literature (See Table 2). Thus, benefits from increased early-stage efficiency do not equate to better outcomes at later stages. The EDMOM framework addresses this limitation. It indicates that we should evaluate the efficiency across the complete funnel and link cost inputs to conversion outputs at every stage in the funnel.

Table 2

CPL vs CAC Misalignment

Scenario	CPL Level	Conversion Efficiency	CAC Outcome	Interpretation
High lead volume, low conversion	Low	Low	High	Inefficient funnel despite strong lead generation
Moderate leads, strong conversion	Medium	High	Low	Efficient allocation and funnel alignment
High CPL, high conversion	High	High	Moderate	Premium targeting but acceptable ROI
Low CPL, fragmented funnel	Low	Very Low	Very High	Structural inefficiency dominates cost

Structural analysis is especially important here; the extent of inefficiencies at the transition points is so pronounced. These transition zones are important when it comes to aligning marketing processes with customer expectations in their journey. Lack of this alignment causes friction in customers, reduces customer interest, and raises acquisition costs. This point echoes the previous research about customer decisions that have shown behavior is sensitive to contextual and experiential factors [18].

Through the EDMOM lens, we can conceptualize these transition points as high-impact efficiency nodes where targeted optimization will deliver a disproportionate performance gain. The results have multiple interpretable roles, with omnichannel complexity having an additional weight. Although integrating several channels represents a goal to improve customer experiences, analysis suggests it creates significant budget challenges.

Failing to maintain a standardized structuring, organizations may allocate resources to different channels but diverge from the reality of customer behavior and hence the process becomes redundant and inefficient [5; 10]. All this underlines the necessity of being able to not only monitor the performance at every channel, but also to combine these channels into a cohesive system.

However, marketing analytics can be seen as insufficient and inadequate if alone. Indeed, plenty of data is no good because it increases your complexity if not underpinned by a structural model [1; 9]. To combat this limitation, the EDMOM framework can integrate analytics into a process-oriented manner to turn data into actionable indicators.

By connecting the output from analytics to the various funnel stages, the framework allows the organization to identify gaps in efficiency more directly, so it can give a better ranking and prioritization of interventions. At the strategic marketing management level, this information has implications. Focus on efficiency

rather than expenditure marks the transition from growth powered by scaling inputs to growth powered by optimizing processes. This view is also echoed in recent literature, which discusses diminishing returns of marketing spend without structural changes (Hanssens & Pauwels, 2016).

Organizations which concentrate on efficiency and elimination of inefficiencies will enjoy greater ROMI, without inflating budgets, and in turn, will be financially strengthened and their resources supported (See Figure 3).

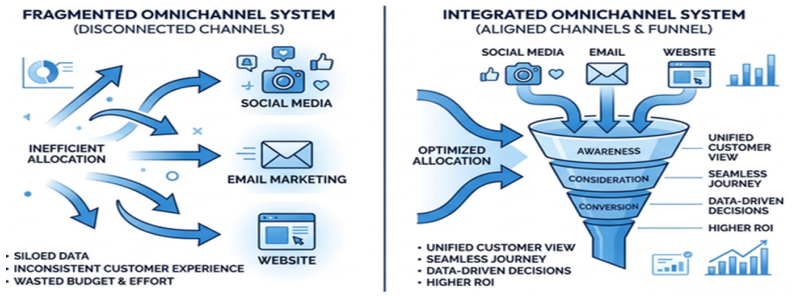

Fig. 3. Fragmented vs Integrated Omnichannel Budget Allocation

Experimentation, and especially A/B testing, are crucial to this optimization process. Previously stated, controlled experimentation will help organizations conduct research on alternative strategies to determine which strategies get the maximum returns [3]. Under the EDMOM framework, which provides the fundamental basis of the optimization layer, A/B testing is not just used as a tactic, but also an element that ensures continual optimization of processes and resource allocation.

This type of experimental approach can be used during performance tuning to improve the optimization process. By incorporating them together, this process is able to enable improvement to be local as well as being tied to the overall system.

This study is a contribution from a theoretical perspective as it synthesizes financial, behavioral and structural aspects of marketing performance in a single analytical model. Despite the fact that these dimensions have been studied

independently, the EDMOM model indicates that their interaction is critical for understanding and improving marketing efficiency. The model provides a more holistic view through an additional linkage of funnel structures with costs and customer dynamics, making for a better understanding of what to analyze and for its more thorough decision making.

Managerially, the model also serves as a practical guide for how to optimize marketing budgets. Instead of just spending more, organizations should focus on conducting structural analysis of their marketing systems, uncovering where efficiency gaps are, and transferring resources into stages and channels that perform best in the target market. This not only allows for an increase in performance, but also improves organizational adaptability in a fast-changing marketplace.

We conclude that the path to improved marketing performance lies not in doing more, but in doing better. Focusing on budget optimization and taking a structurally conscious view as encapsulated in EDMOM can help organizations achieve improvements in efficiency and ROI without expanding their budget commitments (See Table 3).

Table 3

EDMOM-Based Optimization Actions and Expected Outcomes

Optimization Area	Identified Issue	Proposed Action	Expected Impact on CAC	Expected Impact on ROMI
Top-of-funnel spending	Overinvestment	Budget reallocation	Decrease	Increase
Mid-funnel transitions	Conversion drop-off	UX and messaging optimization	Moderate decrease	Moderate increase
Bottom-funnel conversion	Low closing efficiency	A/B testing and offer refinement	Significant decrease	Significant increase
Channel coordination	Omnichannel fragmentation	Integration of channels	Decrease	Increase

Data utilization	Fragmented analytics	Unified performance tracking	Indirect decrease	Long-term increase

Conclusions. To address the issue of optimizing the marketing budget structure, the study has employed a structural efficiency approach; as compared to the traditional view of marketing through expenditure, the latter assumption is challenged.

The results illustrate the fact that marketing funnel inefficiencies and resource allocation processes are a far more important constraint than budget limitations, in terms of return on marketing investment (ROMI).

This study fills this gap with application of the Efficiency-Driven Marketing Optimization Model (EDMOM) which offers a systematic structure in which these discrepancies can be detected and resolved.

Using this model has developed cost per lead (CPL) and customer acquisition cost (CAC) financial metrics as well as funnel-based analysis providing a more holistic perspective on how resources get utilized by the various segments of the customer journey.

The findings show that inefficiencies are most prevalent in the transition points in the funnel and fragmented omnichannel environments, and that channel-process misalignment translates into increased acquisition costs.

The research's key insight is that marketing performance can increase in most cases without ever exceeding available budgets, if focused on process optimization and resource alignment. This means that more efficient processes and improved operations will drive efficiency in various aspects of the organization.

Instead of focusing on scale, companies need to focus on efficiency, utilizing data-driven insights and experimentation to improve marketing systems.

Theoretically, the research is a theoretical contribution which contributes by synthesizing the financial, behavioral, and structural dimensions of marketing performance into a coherent single theoretical model. It provides some managerial recommendations on how to make marketing effective even when working in complex environments.

Extension of such investigation in the future could include empirical evidence of the EDMOM model based on industry and organizational settings and its synergy with both novel technologies and advanced analytics.

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