

TITLE:

Marketing and Financial Metrics in Sales Management

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Abstract:

In this study, we examine marketing accountability by assessing the success of sales decisions made using marketing and financial metrics. 687 Japanese sales managers provided the quantity of both metrics used to evaluate their performance, and our unit of analysis was the individual marketing decision. We considered marketing and managerial controls on the use of these metrics, directing our attention to top management emphasis and vertical information flows. We identify clusters, some of which emphasize several specific metrics, while others used many but reported few.

Literature on management control has considered information flows between managerial layers. We analyzed the quantity of metrics emphasized by top management, and also the amount of metrics required to be reported to upper management after employing the measures of marketing and financial metric use developed by Mintz and Currim (2013). We surveyed more than 800 Japanese managers via the Internet about their recent and specific marketing-mix activity. We collected data on performance separately to avoid common method variance.

Introduction and Objectives:

Growing attention is now directed to marketing accountability. The question of how an organization assesses the performance of its marketing activities holds the key to vitalizing the role of marketing, although academics insist that role is indispensable for success. This is why there have been arguments over marketing accountability. Some argue that the preparation of marketing performance assessment systems (Homburg,

Artz, and Wieseke 2012) is important, while others list the kinds of metrics to be included in the line-up of such assessment systems (Katsikeas, Morgan, Leonidou, and Hult 2016).

Mintz and Currim (2013) contributed to the literature by creating original measures of metric use. They asked managers for the actual quantity of metrics used and found that the numbers of marketing and financial metrics had a positive influence on performance, whereas they noted that a simple linear relationship between metric use and performance was not expected. That is, thresholds or other variables should be involved in activating the use of metrics. Their recent work (2015) further investigates conditions in which metric use is promoted, but presents a challenge in examining the external validity of a linear relationship between metric use and performance. Thus, the objectives of this study are:

- 1) to examine the relationship between the quantity of metrics used and performance;
- 2) to develop a simple statement of the relationship between metric use and performance, toward formulation of a more advanced model.

Although academic concerns surrounding marketing accountability involve interdisciplinary work by researchers in marketing and management accounting, researchers on sales warn that studies of incentives are a prominent issue to be discussed, and that they lack a focus on accountability and performance measurement systems (Zoltners, Sinha, and Lorimer 2012). Kotler, Rackham, and Krishnaswamy (2006) summarized the conflicts between the marketing and sales functions. The sales function needs to be controlled by an appropriate set of performance measurements to avoid opportunism. Our third objective is, thus, to examine whether marketing and financial metric use is beneficial in sales management.

Research Question:

The central question of this study is whether marketing performance assessment through the use of metrics to assure marketing accountability improves performance. Specific research questions are listed below, corresponding to the objectives above:

- 1) Can we reexamine the findings by Mintz and Currim (2013) in a different business setting?
- 2) What variables should be included in a model that does not assume a simple linear relationship between metric use and performance?

Conceptual Framework / Literature Review / Research Model:

The problem of investing in indirect costs is closely related to the reason that marketing accountability matters (Authors 2017). Market-driven strategy (Day 1990) or market orientation (Kohli and

Jaworski 1990; Narver and Slater 1990) stimulated the efforts of researchers to cumulate studies on how an organization succeeds by becoming more and more customer- and competitor-oriented and by smoothing intra-organizational information flows. The role of marketing is expected to be as an evangelist for such orientations by transforming information flows into knowledge (Moorman and Rust 1999). Knowledge of marketing and creativity in marketing influence the relative and departmental power of marketing enabling the marketing function to exert significant influence on other departments, like R&D or manufacturing (Verhoef and Leeflang 2009). However, no matter how the marketing department may insist on the importance of a market-driven strategy or market orientation, it may fail to overcome the problem of budgeting and conflict with the financial department. Verhoef and Leeflang (2009) added the construct of accountability as an antecedent to marketing influence and market orientation. While their measurement of accountability had limitations, as they depended on subjective evaluation of accountability (e.g., asking if one was accountable), they succeeded in attracting subsequent researchers to further refine their construct.

Collaborative studies by marketing and management accounting researchers developed the concept of metric use to measure marketing accountability. Along with studies on the variations of metrics (Ambler 2000; Challagalla, Murtha, and Jaworski 2014; Kosan 2005), Katsikeas, Morgan, Leonidou, and Hult (2016) provided knowledge regarding the kinds of metrics that may be of practical use on occasion. O'Sullivan and Abela (2007) examined marketing performance measurement ability, claiming that the use of a marketing dashboard improved performance. Homburg, Artz, and Wieseke (2012: 75) conceptualized its comprehensiveness by measuring "financial and nonfinancial measures" showing a "balanced picture of the marketing function," the analytical orientation of "cause and effect relationship," and a reflection of strategy in the metrics used. They named that balanced combination of metrics "breadth." Mintz and Currim (2013) conceptualize breadth, more objectively, by counting the actual quantity of marketing and financial metrics used.

Mintz and Currim concluded that the breadth of metrics, both marketing and financial, has a positive influence on performance. They continued to work on a similar project in 2015, and seemed to specify organizational, managerial, and environmental conditions in which metric use is activated. A potential research arena exists to examine the external validity of their findings in a different setting. While they warned that there might not be a simple linear relationship between the breadth of metrics and performance, further investigation has not yet been presented.

With this background, we aim at reexamining the study by Mintz and Currim (2013) to test the external validity of their findings. Our challenge is to provide a perspective on the seemingly less ordinary

relationship between metric use and performance.

To create an advanced model that captures the non-linear relationship between metric use and performance, we rely on control theory. Ambler, Kokkinaki, and Puntoni (2004) referred to control theory to identify how an organization finds reasons for metrics selection. In this study, we introduce two concepts of managerial control over metric use. One is the control of intra-organizational information flows, measuring how thoroughly metric use is monitored. The other concerns top management emphasis as an antecedent of an organization's orientation (Jaworski and Kohli 1993), and functional activities under the supervision of controlling parties such as top management (Chakrabarty, Brown, and Widing II 2012). To capture the former concept, we consider the thoroughness of information flow control by calculating the amount of metrics that managers have the duty to report to upper management layers divided by the amount of metrics used. This concept deals with an ex post procedure of metric use. On the contrary, top management emphasis exists prior to metric use. So we calculate the ratio of the amount of metrics used divided by the metrics emphasized by the top management team to capture the latter concept, top management control over the use of metrics. Thus, we are to create an advanced model for examining the relationship between metric use and performance, by adding examination of managerial control on information flows and top management control.

As Kotler, Rackham, and Krishnaswany (2006) note, the marketing function is a controlling unit in an organization's headquarters while the sales function is dispersed among various local markets. The marketing function is responsible for designing long-term sales plans, implementing them, and monitoring the sales force's opportunistic behavior. Solutions for solving conflicts between these two are needed (Dewsnap and Jobber 2000; Montgomery and Webster 1997). When we focus too much on how we promote customer orientation in the sales function and how we prevent opportunism, the literature on sales is biased toward customer orientation and incentive studies.

Sales studies tend to focus on customer-oriented behaviors, but are apt to concentrate on incentive designs (Pryor, Malshe, and Pradise 2013). Broader, macro aspects of an organization that lead to a sales force's customer orientation need to be associated with micro, systematic procedures and individual codes of conduct. Reexamination of Mintz and Currim (2013) enables us to include such broader aspects of organizational, managerial, firm, and environmental characteristics in our research model. And our attention towards information flow control and top management control derives from the need to integrate micro, systematic aspects of an organization with macro perspectives.

Method:

We employed the common unit of analysis and major research items with Mintz and Currim (2013). The unit of analysis is the certain decision of a recent marketing mix activity. Ten kinds of activities are included: traditional advertising, internet advertising, direct-to-customer, social media, price promotions, pricing, new product development, sales force, distribution, and PR/sponsorship.

Managers were asked to provide us with the number of metrics they used for “a major marketing-mix decision undertaken not so recently that performance evaluation is premature and not so long ago that memory of the decision and its performance is fuzzy” (Mintz and Currim 2013:36). They consider 15 items among the marketing metrics and 15 financial metrics. Both metrics have 12 general items in common, while 3 other items were prepared according to the kind of marketing-mix activity (p. 29). Antecedents and performance indices were also replicated. For the replication, performance indices are evaluated relative to an organization’s stated objectives. We added performance measures relative to competitors because they are employed in other papers on metric use (Homburg, Artz, and Wieseke 2012).

There are several differences from the original study by Mintz and Currim. As we mention in the following section, our research targets are sales managers. The respondent’s functional area is not included. Reliability testing indicated that some items could not be integrated, so we used individual items relating to the respondent’s managerial experience (3 items) and market turbulence (4 items) in the analyses.

For our addition of variables deduced from control theory, we asked managers the amount of metrics that they have the duty to report to the upper layer of management and the amount of metrics that the top management team emphasizes, using the same 30 items of marketing and financial metrics.

Survey research was employed as our data collection method. The purpose of this survey was to examine how marketing and financial measures are used when managers make their decisions related to their marketing activities. Thus, our unit of analysis is an individual who is above the assistant manager level and in charge of marketing relevant tasks, such as advertising, promotion, sales, public relations, or distribution. We conducted online research among full-time employees at private, Japan-based firms. Firms in the financial sector, research sector, advertising agencies, cooperatives, and the educational sector were excluded. To avoid common method bias, we conducted surveys twice for the same individuals. The first survey contained all questions while the second one included only items on performance. The first survey was conducted from October 20 to 22, 2016, and the second survey was from November 24 to December 1. In the surveys, we collected 824 and 798 samples, respectively. Sales managers provided a large portion of our samples, and we collected 687 usable samples with complete answers. All analyses are conducted using these

687 samples, but for those answering “0” for the amount of metrics reported or emphasized, ratios cannot be calculated. In the replicating study, respondents also had the alternative of ‘no information’ about industry concentration.

Findings:

Based on our research questions, we have conducted 3 analyses. The first is a study following that of Mintz and Currim (2013), the second is an analysis adding variables of managerial control, and the third is an additional cluster analysis. We intended to overcome a major problem of the second finding via this cluster analysis.

Although many relationships, both between antecedents and metric use and between metric use and performance, were examined in the original study, our outputs show very few significant results. Only the amount of marketing metrics used is related to performance, but the score of performance is measured differently from the original.

Based on our presumption, we divided our samples into 4 clusters. The variables used for this cluster analysis are listed in Appendix, which shows the average features of each cluster. The first cluster, “Many metrics,” is characterized by its use of many metrics, both marketing and financial. But the samples in this cluster are very few (42 samples). The second cluster, the majority of our samples (406), uses almost “No metrics.” The feature of the third cluster shows a high level of top management emphasis, especially on financial metrics. This “Financial metrics emphasized” cluster consists of 52 samples. The fourth cluster consists of about a quarter of our samples (167) and is characterized by its use of “Moderate numbers” of both metrics. Top management emphasis is not so apparent in this sample cluster.

Next, we have conducted a one-way ANOVA to compare performance and other antecedent variables between these 4 clusters. We excluded variables that were measured by other than 7-point scales (such as dummy variable measuring the presence of CMO). Where we found differences at the significant levels, average scores of the 4 clusters are listed in the lower part of Appendix.

Discussion:

Since our reexamining study did not show exactly the same results as Mintz and Currim’s 2013 study, it is difficult to assume a simple linear relationship between metric use and performance. The results also showed the relationship between metric use and its hypothesized antecedents. According to our cluster analysis, the amount of metrics does matter, especially when an organization uses few metrics; the

organization is likely to fail in that situation. The cluster that is characterized by its use of many metrics showed relatively higher performance, but it is not reasonable to increase the mere amount of metrics.

A complicated relationship between metric use and other variables may make it difficult to reexamine or replicate the study. Mintz and Currim (2015) have been trying to capture all detailed conditions when metric use becomes effective, but this requires us to simultaneously confirm the very importance of metrics use. Our contribution, seemingly just a reexamination, is a sincere challenge to measuring metric use as objectively as possible by following and advancing the arguments of Mintz and Currim.

More comprehensive results were drawn from an advanced research model by adding concepts of managerial control. Though Homburg, Artz, and Wieseke (2012) proposed a model measuring the breadth of metrics by evaluating “the balanced picture of marketing function” with “financial and nonfinancial” metrics (p. 75), we found that different approaches to controlling metric use are beneficial. This is not the balance of metric variation, but respective managerial controls over marketing and financial metrics retain such balance.

For effective use of marketing metrics, top management emphasis before metric configuration is important. For effective use of financial metrics, it is beneficial to smoothe information flows within an organization by setting reporting duties between vertical layers of management.

Conclusion:

As a replicating study, we failed to draw the same conclusion as our predecessors. Nevertheless, we conclude that metric use contributes to improving performance, but the relationship is not simple. One organization that uses few metrics is likely to fail, but the success of another organization that uses many metrics is not guaranteed. Top management control is effective in the use of marketing metrics, and control of reporting duty between vertical management layers is effective in using financial metrics.

Limitations:

We found few significant relationships between metric use and its antecedents, whereas Mintz and Currim (2013) found several and have been examining the conditions under which those antecedents exert influence on the use of metrics (Mintz and Currim 2015). Low coefficients of determination are also a limitation. It seems that their research model is too complicated to be plausible. Survey items and research procedures are complicated as well, and we should have considered the attitude of respondents.

Further Research:

Instead of assuming a direct relationship between metric use and performance, it may be advantageous to examine the behavioral outputs of metric use. Overlooking the causal chains of organizational metric use and performance (Seggie, Cavusgil, and Phelan 2007), we endeavor to create a model incorporating organizational philosophy, systems, procedures, behavioral outputs, and performance indices.

Managerial Implications:

Metric use is indispensable, as the second cluster that uses almost no metrics is far from success. Nonetheless, it is not true that when an organization uses more metrics, it gets closer to success. Instead, clear statements of the top management team emphasizing specific marketing metrics prior to the actual use of metrics are important. Leadership behavior is called for to exploit and vitalize the use of marketing metrics. On the contrary, financial metrics are to be monitored thoroughly. Upper layers of management would better set duties of lower layers to enhance smooth information flows within an organization. For example, an online information sharing system that visualizes metrics and achievements in real time may work well to exploit financial metrics.

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Appendix:

Results of cluster analysis and one-way ANOVA

	1st. Cluster 'Many metrics'	2nd. Cluster 'No metrics'	3rd. Cluster 'Financial metrics emphasized'	4th. Cluster 'Moderate numbers'	
# of metrics used					
Marketing	11	1	4	6	
Financial	10	1	2	4	
# of metrics reported					
Marketing	10	1	3	5	
Financial	10	1	3	4	
# of metrics emphasized					
Marketing	6	1	7	3	
Financial	8	1	11	3	
Number	42	406	52	167	
Average score of performance					
Relative to objectives	3.84	3.51	3.64	3.58	F = 2.791, p = .040
Relative to competitors	3.81	3.52	3.81	3.64	F = 3.831, p = .010
Firm strategy					
Market orientation	4.82	4.25	4.71	4.46	F = 12.320, p = .000
Organizational involvement	4.48	3.97	4.27	4.09	F = 4.991, p = .002
Metic orientation					
Metric-based compensation	4.94	4.36	4.95	4.61	F = 10.831, p = .000
Metric training level	4.46	3.68	4.06	3.91	F = 6.576, p = .000
Managerial characteristics					
Qualitative background	4.64	4.20	4.57	4.43	F = 7.045, p = .000
Firm characteristics					
Recent business performance	4.39	4.06	4.34	4.29	F = 2.926, p = .033
Environmental characteristics					
Market growth	4.76	4.21	4.82	4.42	F = 3.154, p = .025