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How Performance Metrics Help Shape Markets

Abstract:

This paper examines how the use of performance indicators are intertwined with the definition of managerial responsibilities and accountability mechanisms within a fuel retailing company. Following the introduction of category management in the focal company, the range of performance indicators in use is transformed with important consequence for both supplier relationships and the outline of product-markets. Our study shows performance indicators as plastic and reconfigurable intermediaries, shaping visions of the business and the markets in which it operates. In short, apparently mundane performance indicators prove to be devices with significant impact on the company's representations of the markets, opening discussions on strategic matters which affect the outline and structure of markets.

1. Introduction

The theme of this paper is inspired by a practice-based approach to markets, also known as the performativity programme, which can be traced back to the influential volume *The Laws of the Market* (Callon, 1998a). The practice-based approach has recently been adapted and further developed in Marketing with a particular focus on how marketing contributes to the shaping of markets (Araujo, 2007; Araujo and Spring, 2006; Araujo et al, 2008; Azimont and Araujo, 2007; Kjellberg and Helgesson, 2006, 2007a, b; Rinallo and Golfetto, 2006).

The starting point of a practice-based approach to markets is a move from a representational to a performative idiom (Pickering, 1995). A representational idiom assumes that we should strive for comprehensive and accurate representations and typologies of markets (Venkatesh and Peñaloza, 2006). By contrast, a performative idiom directs attention to the emergent and unfolding practices that actors engage in to construct markets. A practice approach starts from the assumption that exchange and markets are entities “in-the-making” rather than steady states, investigates how exchanges become “economic” in character, and what kinds of devices are required for these constructions to hold.

We define “market practices” as the configurations of practices that partake in the construction of specific product markets. This definition highlights a preference for studying markets as ever-changing performances shaped by multiple and distributed calculative agencies (Callon and Muniesa, 2005; Kjellberg and Helgesson 2006, 2007a). As Callon (1998b) and Cochoy (1998) highlight, the role of academic disciplines such as marketing and accounting in construction markets is essentially performative – i.e. they are engaged in the production of the very phenomena they purportedly describe. In Callon’s (1998b) terms, the economy is “embedded in economics”, broadly understood as all forms of expertise involved in analysing and intervening in markets.

Starting from a similar standpoint, Miller and Rose (1990, p. 5) made a cogent argument for the range of technical instruments that render a field of activity knowable, calculable and administrable. A domain is rendered governable to the extent that it can be represented in summary form, allowing calculations and judgements to be made from a distance. The notion of action at a distance is crucial for understanding how a practice domain is constituted as an object of knowledge and made governable. The way action at a distance occurs is through an heterogeneous network of associations involving both human and material elements - e.g. measuring devices, artefacts (Callon, 1986; Latour, 1987). Miller and Rose (1990, p. 10) point out that language plays a key role in establishing these loose networks and in bringing about the possibility of ordering them. It is through common vocabularies and shared language that loose associations between agents across time and space can be established. A variety of different forces can only be enrolled in a governing network if a shared vocabulary exists and objectives and values can be translated from one language into another. Expertise and professionalism play a role here, in setting out claims to disinterested truth and in suggesting means for achieving the desired results.

Miller (2001, p. 379) argues that the study of calculative practices that make the economy visible and measurable, *qua* economy, has been comparatively neglected. Instead, Miller (2001, p. 392) argues, we need studies that:

“...unravel the complex networks that form within and between firms, and the wide range of related actors beyond their boundaries. We need studies that explore the roles particular calculative practices play in making operable the assemblage of ideas, practices and people that forms from time to time”.

Muniesa et al (2007) propose the notion of market devices as a way of referring to the assemblage and multiplicity of material and discursive elements that intervene in the construction of markets – and we should add, modes of economic organising in general. These devices, which have also been labelled technologies of government (cf. Miller and Rose, 1990), are mechanisms through which programs are articulated and made operable. Material elements are combined together with instruments, and by constituting and making visible the objects on which they are applied, they generate a set of problems and solutions which allow the materialisation of focal entity (Lascoumes and Le Galès 2004). Managerial instruments are not simply calculative devices since they also connect calculation to accountability – in other words, they make managers responsible for delivering expected results (Munro and Mouritsen, 1996).

Our paper seeks to bring together the pragmatic turns in marketing and accounting. It follows Miller’s as well as Lascoumes and Le Galès’ suggestion of analyzing the instruments used by those who intend to govern a specific domain. Whereas interpretive studies in accounting have sought to explore the ways in which accounting ramifies, extends and shapes particular socio-economic domains, this paper is concerned with the ways accounting and marketing interact to create representations of and help perform markets.

The paper is structured as follows: in the first section we review the latest contributions to the literature on market practices, covering the sociology of science and technology (SST), marketing and accounting. In the second section, we briefly describe the methodology of our study before proceeding to present the empirical data. Finally, we conclude with some reflections on the theoretical issues that emerge from our empirical study.

2. Performance indicators as market devices

Within the tradition of sociology of science and technology (SST), Callon (1991) has long been interested in the study of techno-economic networks. Techno-economic networks are defined as "...a coordinated set of heterogeneous actors which interact more or less successfully to develop, produce, distribute and diffuse methods for generating goods and services" (Callon 1991. p. 133). They are depicted as being organised around three distinct poles: a scientific pole, that produces certified knowledge, a technical pole that develops and transforms artefacts, and a market pole that encompasses users or consumers, who seek to express and satisfy demands or needs.

This perspective was later extended to the study of markets as a test to the power of concepts derived from SST studies (Callon, 1999). Callon (1998b) focuses on the relation between economics as a discipline and the economy as an entity. Economics does not just observe and analyse how the economy functions, but it helps perform and shape the economy. In Callon's formulation economics is a short-hand for all forms of expertise involved in producing the economy, such as accounting and marketing. The key argument is thus that ideas, models, techniques, methods and professional practices about the economy do not simply describe but actively shape economic phenomena (Porter, 2008).

The idea of performativity was further explored by Mackenzie (2004). He distinguished between two types of performativity. A generic notion of performativity emphasizes that social categories are not natural or self-sustaining but enacted by a variety of performances and artefacts, such as the calculating agencies described by Callon (1998b). A second and narrower form of performativity which Mackenzie (2004, p. 305) calls Austinian performativity (after Austin, 1962), designates "utterances that makes themselves true" by bringing into being the subject of the utterance (e.g. "I declare this meeting closed"). In the case of the economy, Mackenzie (2004, p. 305) stresses that "...it is performed by economic practices, including marketing and accountancy, and by the all-pervasive practices of metrology (the bringing of disparate and what could be regarded as qualitatively distinct entities within standardized systems of quantitative comparison, such as weights and measures)".

Central to the idea of performativity are calculation and calculative agencies. For Callon (1998b), calculation and agency are two sides of the same coin, with calculation conceived as a complex and collective practice combining ideas, metrics and artefacts. An important development of this idea relates to how markets are performed and shaped by multiple calculative agencies that need to be reconciled in concrete cases (Callon and Muniesa, 2005; Kjellberg and Helgesson, 2006). For accounting scholars, the material reality of calculation was highlighted long ago by Carruthers and Espeland (1991) amongst others. Simple accounting tools and inscriptions (figures, charts, tables) are decisive in performing calculations. They define the nature and content of the calculations made by calculative agencies and are seen as open, plastic and reconfigurable intermediaries.

Miller (2001) regards accounting as a key technology of government. As a calculative practice, accounting represents an essential set of devices for acting upon individuals and intervening in their

lives in an attempt to ensure that they behave in accordance with specific economic objectives. For this reason, the calculative practices of accounting contribute to both the make-up and the transformation of the entities they seek to represent. As Miller and O'Leary (1994) reminded us in their study of the Caterpillar Decatur plant, the development of new ways of calculating is inextricably linked to new forms of organising. Calculative practices translate heterogeneous processes into simple and parsimonious figures. They provide tools through which managerial decisions can be made comparable within and across firm boundaries, leading to the emergence of networks of calculative practices. This literature has often called for studies to unravel the complex networks that form within and between firms, a call that has been heeded in recent times (see e.g. Håkansson and Lind, 2004; Mouritsen and Thrane, 2006).

Miller and O'Leary (2007) discuss the instruments that mediate between arenas and actors. In a similar vein to SST scholars, their purpose is to understand how artefacts, such as capital budgeting techniques, mediate between science, technology and the economy. This focus, they claim, should give us a better understanding of the process of making markets. Capital budgeting is defined as an instrument comprising a set of practices that frame capital spending decisions and help align them with other firms. Miller and O'Leary invite scholars to research the ways instruments are used to mediate between the investment strategies and planning procedures of different entities. This call has been reinforced by Ahrens and Chapman (2007) who identify in particular, the possibilities of looking at management control numbers as resources for action, and as tools to advance managerial interests and agendas.

Muniesa et al (2007, p. 2) argue that the notion of market devices is crucial in addressing these concerns:

"We believe that the notion of 'market device' – a simple way of referring to the material and discursive assemblages that intervene in the construction of markets – can be useful in addressing these concerns. After all, can a market exist without a set of market devices? From analytical techniques to pricing models, from purchase settings to merchandising tools, from trading protocols to aggregate indicators, the topic of market devices includes a wide array of objects. "

For marketing scholars following the IMP tradition, the theoretical agenda is both to explore the role of accounting in business relationships as well as investigate the interaction between accounting and market practices. Market practices bring together a variety of market actors acting in accordance with different market representations and engaging in divergent market practices, each trying to shape the market in a different fashion (Araujo, 2007; Azimont and Araujo, 2007). In short, market devices play a role in configuring calculative agencies and in qualifying transaction objects (Callon et al, 2002). In this paper, we argue that the study of how performance indicators are constructed and deployed in market practices is one fruitful avenue for examining how market are shaped. The remainder of the paper is structured as follows: first, we analyse the performance indicators in use in a fuel retailing company before and after the implementation of a major structural change, the introduction of category management. Secondly, we analyze the ways in which

performance indicators are transformed as the organisation undergoes a restructuring process, and how these transformations impact upon supplier relationships, and the shaping of specific product-markets.

3. Method

Our study focuses on a fuel company retailing network which moved, in the course of 2003, from a product to a category management structure. This move was accompanied by a radical change in managerial responsibilities, in work processes, as well as the range of performance indicators used. The empirical material presented here is based on how these changes affected managerial perspectives on ideal product assortments for the company's petrol forecourt stores. As a methodological strategy, we made use of Latour's (2005) injunction to follow actors and artefacts. In particular, we analysed key performance indicators dashboards to delve into the logic used by managers when they measured the performance of products and suppliers in a particular product category, as the company moved from a product to a category management structure.

The first author acted as an observer throughout these changes, following a period of involvement with the focal retailer as a researcher, trainer and consultant. The role was that of observer-as participant (Ackroyd and Hughes 1992, p. 135). In management research this strategy has been mainly employed in longitudinal studies of organisations (Kunda, 1992; Watson, 1994) and projects (Gersick, 1989). The major justification for the use of participant observation methods is that they facilitate an insider's perspective in naturally occurring phenomena in a particular empirical setting. One obvious challenge in deploying this method is the balancing of the dual roles of researcher and participant.

The researcher had previously developed contacts and relationships with key individuals in the focal retailer as part of a broader longitudinal study centred on the introduction of category management over a 4 year period, from 2002 to 2006. This research project relied on a close and frequent involvement with the retailer and relied on a variety of data collection mechanisms, including interviews, field observations and action research initiatives such as training seminars. The close involvement with the retailer facilitated access to the empirical material used in this study, namely company documents, spreadsheets and database requests used by the managers in analysing the performance of products and suppliers.

4. The Empirical Study

When monitoring the performance of businesses that they are accountable for, managers in the fuel retailer's organisation used a dashboard featuring a set of measures: sales in volume and turnover, the contribution of each individual stock keeping unit (SKU), the margin in absolute value, as a percentage of sales and as a contribution to the total margin, the cumulative sales and margins, and lastly the number of SKUs. In order to capture the evolution of performance, the same parameters

were analysed over a period of 2 years. The analysis was carried out at a business category level, before it was performed at the national level. In the following sections, we focus our analysis on the beverage category, although we will later take a broader view of the business.

4.1 The Product Management Era

Within the retailing side of the fuel company, the strategic unit was the petrol forecourt store. The role of a store is to deliver fuel. Consumers stop there to buy fuel, first and foremost. The building attached to the forecourt is designed to expedite the payment of fuel. On their way to the paying station, consumers may be tempted to buy extra products such as confectionery or beverages. However, shop items are secondary to fuel sales and their role in the portfolio is to generate additional turnover. The role of the shop assortment is tactical. The objective of shop sales is to cover the distribution cost of fuel so as to maximise the fuel margin. As long as this objective is reached, the shop justifies its existence.

To manage the business in this configuration, a store manager is responsible for the fuel forecourt operations, reporting to a district manager whose responsibility is to ensure the development of a set of forecourts in a region. The district manager's primary responsibility, in addition to ensuring good operational management (including stock management, delivery, and service levels), is the implementation of the network's security policy. The district manager is also responsible for human resources. To help the manager deal with the development of shop sales, "the diversification business" as it was known, the district manager had an assistant, the shop adviser, whose job was to help store managers implement all activities related to shop sales. In practice, the shop adviser checked that all products listed were properly merchandised, linked to the recommendations made by product managers sitting at regional headquarters.

Central office functions were support functions for store activities. A product manager was not expected to analyse markets or understand their dynamics. The product manager was there to develop the planograms which included the assortment defined and negotiated by a retail director, who covered both fuel and shop sales. Once the planograms were defined, product managers worked with suppliers to select the appropriate promotions. The role was thus predominantly one of selecting out of the many proposals on offer, the best supplier deals and roll them out across the network. The product manager interfaced with the field managers (district manager, shop adviser, store manager), checking product codes, ensuring that the store managers knew how to order products through a wholesaler, verifying that promotional materials were delivered on time, etc.

The job of a product manager was thus an operational one. Product managers spent the vast majority of their time on the phone, dealing with the management of operations, and spending little time analysing the business. The dashboards used need to be very simple to help managers keep track on how the business was performing. The performance of a store was broken down to the product level and it was then aggregated at the national level on key performance indicators such as volume, sales, profit margins (calculated as the difference between the sales and the cost of goods)

and the number of SKUs. A series of simple ratios featured in these dashboards: the contribution (the weight of each segment on the total) to volume, to sales, to profit margin and to assortment. Table 1 provides an extract from such a dashboard.

Table 1 : Beverage category dashboard – October 2004 – CAM

Sub-Group	Unit Sales 2004	Contribution to Volume	Sales Ex.VAT 2004	Contribution to Sales	Profit Margin 2004	% Margin 2004	Contribution to Margin	Nb of SKU	Share of Assortment
Total Cola	2317778	30%	£2 152 202	31%	£898 681	42%	30%	59	22%
Total Sport	967985	13%	£953 084	14%	£383 179	40%	13%	31	12%
Total Still	1238956	16%	£910 776	13%	£498 340	55%	17%	26	10%
Total Energy	692930	9%	£836 297	12%	£374 788	45%	13%	16	6%
Total RTD	886807	12%	£642 616	9%	£257 793	40%	9%	34	13%
Total Fruit	653015	9%	£569 799	8%	£225 967	40%	8%	33	13%
Total Juice	268881	4%	£229 055	3%	£75 081	33%	3%	9	3%
Total Flavoured	263241	3%	£204 715	3%	£98 584	48%	3%	8	3%
Total Lemonades	145930	2%	£154 999	2%	£73 676	48%	2%	4	2%
Total Pure Juice	116840	2%	£107 668	2%	£46 440	43%	2%	19	7%
Total Concentrate	33937	0%	£52 738	1%	£20 833	40%	1%	10	4%
Total Sparkling	29051	0%	£19 644	0%	£11 732	60%	0%	2	1%
Total From Concentrate	15011	0%	£11 283	0%	£3 571	32%	0%	5	2%
Total Mixers	7305	0%	£8 630	0%	£3 295	38%	0%	5	2%
Total Iced Tea	7010	0%	£5 855	0%	£2 826	48%	0%	2	1%
Total Smoothies	2	0%	£3	0%	£1	26%	0%	1	0%
TOTAL BEVERAGE	£7 644 679	100%	£6 859 364	100%	£2 974 785	43%	100%	264	100%

The analysis carried out by the product manager, two or three times a year before supplier meetings, consisted of defining which segment, and which suppliers were performing best. Following this analysis, managers would listen primarily to the suppliers who performed best, according to predefined rules and indicators. Supplier meeting were spent discussing how to help push the favoured suppliers' innovations and marketing campaigns.

The above table shows that some segments were doing well with major contributions to volume, sales and margin. The colas achieved 30% of volume and 31% of the total sales, 30% of the total margin with an average margin rate of 42%. In addition, they achieved this performance with a number of SKUs which represented only 22% of the total assortment. The energy drinks achieved a high level of sales (12%) with a limited number of products (6% of the assortment), a high margin rate (45%), above average for the family (43%), and a respectable contribution to margin (13%).

In both cases, performance was deemed "good" because the product families are major contributors on all indicators. It was a logic based on the key drivers of the beverage category. We can also say that they performed well because a reduced number of SKUs generated a higher contribution to volume, sales or margin. And lastly, these two families, the colas and the energy drinks, generated a margin above the average for the category. They are seen as "anti-dilutive", as opposite to "dilutive" in financial terms.

But the table also highlights the poor performance of some segments, as is the case with juices. With 9 SKU's representing 3% of the assortment, this family achieved 4% of volume, 3% of sales, its contribution to the margin was 3% and the margin rate of 33% was well below average for the segment (43%). The juices were a problem because their weight in the total business was significant, but this family is dilutive of the total margin. It is not contributing to sales, which in the mind of product managers, is equivalent to not addressing "customer needs".

To analyse the evolution of the business, the 2004 data was compared to the previous year. At the moment of the October market review, the cumulative annual sales were considered with 12 comparable months including the high season. Regarding the performance of our segments, the conclusion remained the same. This global, simple analysis was based on demand measured by volumes and sales. It was built upon basic economic factors, and the profit margin generated by each family is what counts. The indicator which linked the number of SKUs with the sales performance though, suggested that limited resources were expected to produce a high level of return. It is better to have a high turnover with a limited number of SKUs, rather than the same turnover with a larger product assortment.

We may assume that a concentration of the assortment on the major segments would lead to a higher performance for the total family. Thus some segments should be discontinued. The analysis carried out by the product managers should lead to a significant reduction in the weight of the fruit juices in the assortment. The diet segment should also be reduced, at least for the larger containers. Conversely, it appears that the energy drinks should be explored further. These decisions affect the assortment displayed in the stores and made available to consumers. They directly contribute to the shaping of the product market in question. Once the analysis of the segment is completed, the product manager defines which products should be kept in the assortment and which ones should be discontinued. A more comprehensive analysis is required at the SKU level.

The performance of each individual SKU, as well as the performance of the product family is analysed with simple tools such as classification and class analysis. In the following example based on the cola segment, we can easily see that the 10 best performing SKUs are doing 3 times better than the 10 following ones (the figures featured are as they exist at store level)

Table 2:

Cola	Annual Sales	Weekly sales
10 first	8915	171
SKU 11 - 20	2759	53
SKU 21 - 30	1217	23
SKU 31 - 40	665	
SKU 41 - 50	97	
SKU 51 - 60	0	
TOTAL	13653	263

The detailed analysis of the 10 best and worst items shows yet again significant concentration effects.

Table 3

Ranking	Designation	Sales	in %	Cum sales
1	Coca Cola 500ml 500ml	1 898	14%	14%
2	Diet Coke 500ml Pet 500ml	1 478	11%	11%
3	Coca Cola 330ml	915	7%	7%
4	Diet Coke Can 330ml	485	4%	4%
5	Coke 2 Litre 2ltr	1 252	9%	9%
6	P7 Coke 3 For 1.90	918	7%	7%
7	P3 Coke Deal 2 For 1.25	539	4%	4%
8	P6 Coke 3 For 1.90	789	6%	6%
9	Dr Pepper 500ml 500ml	324	2%	2%
10	Diet Coke With Lemon 500m	317	2%	2%
TOTAL	Cola	13 653	100%	100%

Ranking	Designation	Sales	in %	Cum Sales
41	P8 Irn Bru 2 For 1.30	3 898	0%	0%
42	Coca Cola 2x2ltr Pm2.29	6 566	0%	0%
43	Pepsi Twist 500ml Pet	2 592	0%	1%
44	Vanilla Coke Pet 2ltr	5 097	0%	1%
45	Diet Coke Vanilla 2ltr	3 944	0%	1%
46	Coca Cola 6pk Canspm1.99	3 938	0%	1%
47	Diet Coke 2x2ltr Pm2.29	4 061	0%	1%
48	Diet Coke 6pk Canspm1.99	3 255	0%	2%
49	Diet Coke 2x2 Ltr 2ltr	536	0%	2%
50	Coca Cola 2x2ltr Pm 2.19 2l	251	0%	2%
TOTAL	Cola	13 653	100%	100%

It appears that items such as the diet coke vanilla 2 litre bottle should not be kept in the assortment. As this result is confirmed at the regional and national levels, a discussion with the supplier will follow. To prepare the meeting with the supplier, the product manager wants to have a picture of the global performance for each supplier within the category. The data is aggregated to give a picture of each supplier's performance. The ranking looks as follows (the table shows the performance of the 3 suppliers of 1 segment, within the category, with the name of suppliers disguised for confidentiality reasons):

Table 4

	Purchase	Sales	Commercial margin		
	in Value	in Value	in Value	Margin in % of sales	Contribution to Margin
Category 1					
Supplier A	120	167	47	28%	32%
Supplier B	110	167	57	34%	39%
Supplier C	100	143	43	30%	29%
Total Category 1	330	476	146	31%	100%

Supplier B delivers the best margin as a percentage of sales and in absolute value. As far as contribution to margin is concerned, B is the preferred supplier. Supplier A delivers the poorest margin on sales. But considering the absolute margin in monetary terms, it is the second best contributor, behind supplier A.

For a product manager, who has limited time to analyse the business, the rule of thumb is that supplier B is best and should be prioritised in terms of recommendations and proposals. The product manager will have a tendency to listen to supplier B's offers on sales promotion more often,

and help push its products above others. The result of these efforts will become visible in the stores' displays with consequent impact on consumer purchases. The perception of a supplier's performance defined through dashboards, has thus a clear impact on the probability of acceptance of the supplier's marketing programmes and affects the product-market dynamics.

If a supplier has a range of brands and products which cover different segments, it may well be that poorly performing products are kept in the shops' assortment because the supplier is performing well globally. This can explain why, for example, fruit juices still feature in the range displayed in the stores even if their sales performance is disappointing.

In this business configuration, it is not the decision of the product manager to discontinue products but the retail director's. However, as mentioned earlier, the retail director has little time to spend on the shop business because the major challenges are on the fuel distribution side. Specific deals that the retail director may have struck with particular suppliers are kept hidden from the product managers' view and do not feature in the dashboards.

4.2 The arrival of category management

The organisational structure and work flows of the focal petrol retailer were based on a singular vision of the business. The role of the business was to manage fuel operations and deliver fuel to consumers through petrol stations. Shops were seen as a secondary business as a direct consequence of this fuel-centred vision. This vision came under fire when extensive market research showed how important the shops were for the overall business. Consumers stop at a petrol station, the research suggested, for many other reasons than to refill. Petrol stations may, for example, be used as comfortable rest stations on motorway journeys or as convenience stores on the drive back home. The study showed that in some European countries, up to 2/3 of drivers who stopped at petrol forecourts did not buy fuel.

The role of the store had to be rethought to take into account these new findings. In other words, the company had to broaden its retailing vision rather than seeing itself as just a fuel retailer. A new organisational structure was proposed to better address the management of the retail activity. The core idea was that the company should organise itself according to business lines, called activities. Fuel should be one of these activities, a very important one, albeit only one activity amongst others. Rather than persisting with the opposition between fuel and non-fuel (or diversified activities), new denominations were introduced. The key activities were to be fuel, shop, and services, with a manager supervising each business and reporting to the retail director. The company wanted now to measure the performance of each store, region and country, as before, but also the performance of each activity.

As the shop business is a complex one, the manager in charge of the activity was staffed with category managers, each of them, in charge of a few product lines, such as beverages. The task of a category manager was to manage all processes designed to enhance the activity, from purchasing through to developing marketing activities, down to the implementation of plans at store

level. The role of a product manager was still operational and concerned with the development and implementation of planograms and promotions. The category manager, instead, became the general manager of a business across the whole retail network. The category manager undertook operational as well as strategic responsibilities, traditionally outside the scope of the product manager's job such as purchasing and investment decisions.

To track the performance of a category, a category manager needs tools to give him or her the overall picture of the business. As responsibilities have changed, the category manager can now see the overrides which were previously negotiated by the retail director, as well as having a clearer view of promotional deals. Whereas product managers dealt directly with suppliers, category managers focus on markets since category performance is what they are accountable for. In their negotiations with suppliers, category managers have now a full overview of the various constituents of deals with suppliers including overrides and promotional rebates. They can calculate a "global margin", to coin a phrase, which includes three dimensions: the upfront or commercial margin, the overrides and the promotional rate. Usually, the upfront margin of a product is calculated by subtracting the selling from the purchase price of an item. The overrides are a type of incentive that manufacturers give to persuade reluctant retailers to list one specific item in their assortment. The supplier can agree to give the retailer an incentive in the form of an extra margin, provided the retailer lists some slower selling products alongside faster moving ones.

The award of overrides is a common mechanism that takes place when a manufacturer wants to launch a new product whose success is regarded as uncertain. The incentive covers the risk of poor performance in the first year. As suppliers can usually mobilise important market research and advertising budgets, they try to assess the probabilities of a product to perform well and therefore ensure that the concession of overrides will pay back. After some time, when sales figures become available, suppliers can check if the innovation proposed did well or not. If it did not, the retailer will usually threaten the manufacturer with delisting the item. To give the product a further chance, an extra incentive can be given to compensate for the slow up-take of the innovation. These extra incentives can thus be significant.

The acceptance of overrides by the retailer can be analysed in two ways. On one hand, it is a way to secure a margin at no risk since overrides are guaranteed. On the other hand, they may be dangerous because they incentivise a retailer to carry items whose upfront performance is poor, reflecting a low level of consumer demand. A retailer who would want to maximise overrides would be flooded by laggards. After some time relying on overrides, a retailer would end up with a poorly performing assortment in its stores. Indeed, a safe margin on slower moving items may not compensate for the commercial margin that a higher rotation item would have generated.

Overrides are part of the manufacturer-retailer negotiation. A manufacturer will list some of its best performing brands or products together with a few less performing items. Part of the back margin may be paid to the retailer immediately but usually, it will be attached to specific conditions and paid at the end of the year. These monies are therefore not spread across all SKUs to smooth over commercial margins. They are kept as a global package attached to a manufacturer and no basis

for apportionment to SKUs is sought. This was the reason why this factor was not part of the product manager's dashboards. Now that a category management structure is in place, each manager wants to see exactly what part the overrides play in his global margin. Furthermore, if one supplier deals with one category manager only, the ability to capture overrides reflects the negotiation talent of the latter. It is therefore essential to make the overrides visible.

Next to the overrides, sales promotion activities can explain how a product can survive in a retailer's assortment despite low sales. Sales promotions are normally used to enhance the performance of a product. Through sales promotions, manufacturers can seek to amplify seasonality effects, block competitors through attractive offers and so on. But promotions are also used to boost the sales of a product whose performance is flagging. The special price that the retailer will get during the promotion period is passed on to the final consumer price so that the initiative generates incremental sales. But promotions generate significant costs. The retailer tends to look at deviations from standard operations as costly disturbances. The retailer therefore tries to compensate for these costs by an additional margin called the promotional rate. When this extra margin has been added, the on-promo margin rate can be similar, if not higher than the off-promo rate.

Regarding promotions, manufacturers pursue different policies. Some promote their products to the minimum and prefer to advertise heavily, using the rationale that advertising expenditure helps build brand equity. Others prefer to spend their marketing budget on activities which are closer to the point of sale. The impact of promotions on sales can also vary widely. Some product families are very sensitive to sales promotions and are rather "promo dependent". In these cases, promoted volumes can reach 40 % of sales. Conversely, other product families can be little affected by promotions.

Our focal retailer shifted its views on performance dramatically in the space of one year. With the implementation of category management, one manager is responsible for purchasing as well as marketing a category. Because the manager is accountable for the performance of the category, the tendency is to combine factors which were previously kept apart. The need is thus for performance metrics that capture the whole picture. From a broad perspective in which only the commercial margin was monitored, category managers requested a dashboard displaying the total margin, including the three levels described above. A new managerial instrument was developed and the following table provides an extract:

Table 5

	Purchase	Sales	Upfront margin			Promotional Margin			Back Margin			Total Margin			
	in Value	in Value	in Value	Margin in % of sales	Contribution to Total Margin	in Value	Margin in % of sales	Contribution to Total Margin	in Value	Margin in % of sales	Contribution to Total Margin	in Value	Margin in % of sales	Contribution to Total Margin	Share of Margin
Category 1															
Supplier A	120	167	47	28%	66%	20	12%	28%	4	2%	6%	71	42%	100%	37%
Supplier B	110	167	57	34%	88%	5	3%	8%	3	2%	5%	65	39%	100%	34%
Supplier C	100	143	43	30%	75%	7	5%	12%	7	5%	12%	57	40%	100%	30%
Total Category 1	330	476	146	31%	76%	32	7%	17%	14	3%	7%	192	40%	100%	100%

With this dashboard, suppliers' performance looks rather different. Table 5 shows that Supplier A delivers the highest level of total margin, both in percentage and in absolute value, but it is now the third supplier if we look at the upfront margin (28%). Supplier B who was the preferred supplier on the basis of the upfront margin alone, is now the worst performing and below average if we look at total margins. Lastly, supplier C delivers a 40% total margin, which hits the average despite a below average upfront margin (30%) but compensated by a higher back margin.

As the scope of the category manager's mission changed, a change in managerial instruments followed. Based on this fresh perspective, the initiatives of supplier B will now be looked upon with a lower degree of interest as it is now the "worst-in-class" supplier. Because various responsibilities which were previously kept separate are now grouped in one role, pictures that were kept hidden from the product manager are now clear and transparent to the category manager. And in negotiating with suppliers, the category manager will now be able to link this information directly to market data. The poor performance of a product will now be very hard to disguise or compensate for. And should that still be the case, the amount of overrides sought by the retailer will be much higher than previously.

But suppliers may also be able to see new opportunities in this new scheme. To take one example, since the analysis of a product performance is mainly influenced by the segment to which it belongs, the classification of a new item is of paramount importance. Let us consider the water segment, discussed at length in an earlier paper (Azimont and Araujo, 2007). Supplier B has developed an innovation which consists of mineral water with a touch of fruit flavour. Flavoured water can either be classified as a sub segment of the mineral water segment, or as a subsegment of the fruit beverages. The performance consequences of these alternative classifications are significant:

Table 6

	Margin rate	Sales growth
Water	58,84%	-4,58%
Carbonated fruit Beverages	45,48%	-10,46%
Flavoured water	56,49%	42,58%
TOTAL NAB'S	47,94%	6,69%

Placed among the waters, flavoured waters have a lower margin rate than the average of the segment though still high. Flavoured waters show a high sales growth when compared to the

segment evolution which shows a slight decline. Should it be classified as a carbonated fruit beverage, it not only delivers a fantastic margin but its sales growth could be seen as a way to boost the entire segment. On top, supplier B is the market leader on the water segment. The development of sales in the carbonated fruit beverages generates less cannibalisation than in the water segment. Using the first dashboard, and assuming that the innovation is classified as a water, the performance of the new product can be regarded as acceptable. If we use the second dashboard and classify the new product as a water, the innovation is less likely to be accepted.

The category management logic has also given a financial flavour to the way performance is assessed. The commercial logic of assessing margins is now confronted by an investment logic where outputs are compared to invested inputs. In the case of a retailing company, four types of inputs have to be considered. The costs of the land, the building, the type of store furniture used and the stock (the factors linked to the payment terms included in the working capital play a minor role on a proximity channel). Because category managers are incentivised to develop their category, they need resources to position their products in the stores. The logic of space productivity is thus added to the logic of margins. A simple ratio is calculated to account for the cost of land and the building, the gross margin ratio of a product family to the cost of one square meter of retail space. This ratio is called gross margin return on surface (GMROS). However, the cost of the specific types of furniture used to display the merchandise in stores is not included. A chilling cabinet, for example, has a higher cost than a dry shelf.

Using a category logic, all beverages are equal because they share the same chilling cabinet. One beverage brand competes against another, side by side. However, if one wants to expand the category, a decision has to be made on the allocation of space, taking a broader perspective. Should the company award ten extra square meters of space to beverages, to sandwiches or to automotive spare parts? This decision cannot be made within the category management framework. As soon as a specific alteration to the physical layout is required, say to install a chilling cabinet, the technical department will have to give green light before it can proceed. And, of course, the finance department will request the filling of a capital expenditures request (CAR) form from the respective category manager.

The return on each category can now be assessed and compared with each other, leading to a new vision of what a petrol station is. The fuel distribution activity requires a huge investment in security and environmental protection but delivers a significant margin, particularly if one adds up the upstream margin to the retail margin. Toilets need a fair amount of space and do not make any money, although they have to be there to fulfil expectations regarding the function of petrol stations as stopovers. The showers on a motorway station also need a lot of space but the service is charged at a rate that covers the cost of exploitation. On one hand, the toilet activity is regarded as a free service whereas the shower activity is defined as a chargeable service which raises question on the political processes that established such norms.

The shop items deliver a great margin, but they also require specific investments which they need to pay for. And their contribution to profit, once investment costs are factored in, are no longer as

attractive. A coffee vending machine is rented, the cost of operating the machine is integrated in the rental fee and suppliers replenish their machines. A soft drinks chilling cabinet is bought, the cost of operating the chiller is carried by the retailer and the activity of replenishment is covered by the staff. If a new chilling cabinet has to be installed and paid for, the cost will be charged to the beverages category. The investment can no longer be included in a generic store investment package.

While the beverages are still performing well, they are no longer seen as the most attractive category. Compared with other activities, such as the sandwiches, confectionery or tobacco, the beverages require more resources. DVDs and other new lines such as telephone cards, require little space and need no specific investment, but deliver a good margin and a very good return. When benchmarked against these new businesses, the conclusion is that the beverages' in the store should be reduced.

5. Discussion

Category managers take the role of an analyst when they have to assess the performance of their category and subsequently, the performance of the suppliers they want to collaborate with. They have to analyse the past and present performance of the category and formulate recommendations for the future. But the tasks of category management are not external to the devices they deploy. Their analysis and decisions are shaped by these instruments and the units of analysis they work with.

In the first phase of our study, the idea of the identity of the company is clearly that of a fuel company with a diversification business and the reference market is "petrol station retail". Consequently the performance of shop items is of secondary interest. This performance is seen as a mere complement to the total margin of fuel. However, as soon as the focus shifts from the fuel to the "fuel-plus-the-shop" business as a whole, the reference market becomes retailing in general rather than just fuel retailing. The outline of the market is changed through a fundamental shift in representational practices, as highlighted by Kjellberg and Helgesson (2006).

The analysis of the dashboard in use in the first part of our case description suggests that there should be a balance between contribution to volume, margin, assortment and consequently share of shelf space. A market share leader in the beverages market usually argues that share of shelf space should be proportionate to market share. This rhetoric is designed to reproduce the *status quo*. In fact, one could argue from an opposite stance that, if the demand and rotation for a product is high, we should conclude that the product needs less space to generate the equivalent sales of a product whose demand is lower.

This kind of argumentation shows that it is in suppliers' interests to influence how performance is defined. In one particular case, a merchandising software programme automatically incorporates this rule in the calculation of shelf space allocation. By influencing representations and performance measurement models, suppliers act on exchange practices (e.g. which product should be selected and displayed in stores) and norms (e.g. "the share of shelf space should be equal to market share")

mediated by particular instruments (e.g. a merchandising piece of software that embodies a specific concept of performance). The instruments mentioned here, such as a dashboard or a merchandising software programme, contribute to market-making in the sense that they frame decisions of category managers and help align the investments of suppliers and retailers. In this sense, they perform the role of mediating instruments as defined by Miller and O'Leary (2007).

Another interesting dimension highlighted by our empirical data is the way through which the performance of specific SKUs can be aggregated into the performance of various meta-units such as a store, a region, a segment or a supplier. The implementation of category management leads to the creation of indicators at a category level, on top of the indicators presented so far, which measures the performance of stores and geographical regions. The variation of performance of one supplier across product segments was less visible prior to the introduction of category management. Now that the new structure is in place, the poor performance of say, the fruit juices category can't be hidden behind the good performance of the colas. As a consequence, the fruit juices will be given less emphasis in terms of attention and budget and will probably suffer a faster decline. The organisational dimension has thus a strong impact on the measurement of performance through the way it impacts on disaggregation and re-aggregation mechanisms. And, in turn, it has a direct impact on the dynamics of the market under scrutiny.

The grouping of activities under one single role also gives access to new combinations of performance indicators. An indicator, apparently as simple as a margin, can be reconfigured as our data has shown. As soon as the upfront margin is aggregated with overrides and promotional rates, suppliers' performance is thrown into a different light. This notion also shows how important are the efforts deployed by manufacturers to push a product into stores and get it exposed to consumers.

The accounting literature has tended to gloss over the work done by performance management tools such as dashboards (tables, charts and figures) and their appropriation as discursive and practical resources in managerial work (Ahrens and Chapman, 2007). We suggest that the analysis of these devices can help to understand how managers express judgments and pursue agendas, as for example, which supplier, brand and SKU is performing best. We claim that this understanding can provide a better insight into the ways managerial attention and resources are allocated which subsequently has an impact on what products are displayed in stores and ultimately, on how markets are made and reshaped.

With category management, a financial dimension is added to the performance measured. Since category managers are naturally keen to expand their businesses, our case shows that an investment logic will eventually come into play. A mundane investment decision, such as the installation of a chilling cabinet in a fuel station, pushes the manager into the world of capital expenditures requests where additional indicators (e.g. return on employed capital, discounted cash flow, internal rate of return or pay back) will need to be calculated. When invited to deploy these indicators, financial managers pursue a different vision of markets. A petrol station is regarded as a space of monetary flows. A product category should be able to justify its occupation of shelf space. A strategic discussion starts as soon as one asks why toilet use should be free, why should the

company keep selling fuel when the investments for securing fuel retail environments are so high, why not sell apparel or electronic goods in petrol stations as the operating margin of these categories is high and they occupy limited space. The organisational restructure triggers a shift in relevant performance indicators and opens up new strategic agendas for the business.

In short, an organisational change such as the implementation of category management challenged the way the performance is defined and measured. The initial “volume, sales, margin” vision of commercial performance is replaced by a vision where managers measure returns to invested inputs. Our case shows that apparently mundane performance indicators are artefacts which impact considerably the representations of the markets, opening discussion for matters which both affect the stability and the change of market outlines and structures. To coin a phrase, these instruments have a complex social life. They are hardly innocent tools designed to track the implementation of decisions. As calculative tools, they are not only devices to ensure that managers behave in accordance with specific business models, but are also a political technology linking calculation to accountability, generating new strategic options and (re)shaping markets.

6. Conclusions

The use of performance metrics has been discussed largely as an intra-organisational phenomenon (Ahrens and Chapman, 2007). Despite recent attention to how accounting is penetrating new domains and hybridizing itself in contact with other forms of expertise (Miller et al, forthcoming), there have been few empirical studies that document how accounting numbers help shape markets. In the empirical case presented here, accounting numbers play a number of roles. They complement organisational changes, render particular entities visible (e.g. product categories), help define performance at different levels of analysis, from individual SKUs to suppliers’ total offering, but also serve to align the activities and expectations of a retailer and its suppliers.

More concretely, our study has shown how subtle changes in organisational structures and roles and shifts in units of analysis lead to radical reinterpretations of what constitutes good performance as well as opening up new strategic agendas in the focal retailer. If the function of a petrol station is reframed to a retail shop plus fuel delivery, and the focus shifts from fuel to the broader range of activities that can be carried out at a petrol station, major implications follow. The shop is now analysed according to a new spatial logic of maximising returns from every square meter of space available and new opportunities have to be appraised in relation to returns on investment of that activity. The performance of suppliers in every category is now transparent and comprehensive through the aggregate view of all the margins associated with each SKU. But categories can also be aggregated and their combined performance benchmarked against each other. In this process, the role of a petrol station, its product assortment, the relationship with suppliers and its positioning in the retail market, are all parameters that can be periodically reassessed and changed.

Our case illustrates how markets are shaped through defining and redefining entities and processes of managing and controlling that are never fully stabilised. Our major concern in this paper has been

to show how accounting numbers and market practices are connected in an iterative and circular fashion. If market practices have an important representational facet in terms of figures, charts, diagrams, spreadsheets and performance metrics dashboards, we will do well to remember that all these devices constitute important resources to “act back” on the practices they faithfully represent. In this sense, both representations and the worlds they characterise are caught up in a dynamic process of co-evolution and mutual influence.

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