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Impact of environment on performance measurement design and processing in retailing

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Abstract

Purpose – By focusing on the interface between information dissemination and interpretation at the retail sales floor, the purpose of this paper is to open up new practice theory contribution on management control and performance measurement used in complex environments.

Design/methodology/approach – Problem-centered qualitative interviews in two different contexts (USA and Europe) build the methodological approach. In total, 22 interviewees were selected from various retail sectors and hierarchy levels with the focus on store management. Following content analysis procedures, data were coded according to contingency theoretical underpinnings.

Findings – Environment shapes corporate processes as well as retail management in multiple ways. By studying fast fashion industries, the authors found similarities in retail management in all researched settings. First, the authors present relevant operational performance metrics in the retailing context. Second, the authors see that store managers aim to optimize processes and generate efficient and effective practices to maximize store performance. Third, information and task overload are reasons for neglecting performance information. As a consequence, managers call for decision-facilitating tools, e.g. dashboards, to reduce information complexity.

Originality/value – Widely accepted in contingency literature, environmental aspects influence business activities and performance outcomes. However, evaluating research studies that deal with performance measurement in retailing contexts reveals contradicting results. With the focus on larger retail companies with multibranch and department structures in two different national contexts the authors can unravel different perspectives on environment in operational retail settings for the first time.

Keywords Contingency theory, Performance measurement, Decision-facilitating function, Operational, Retailing industry

Paper type Research paper

Introduction

After several decades of intense research on performance measurement design, the well-known statement "You can't manage what you don't measure" by Peter Drucker is still dominating management and marketing discussion (Drucker, 2014; Martin, 2014). Especially in retailing, an industry where companies adjust their multidimensional processes to environmental changes managers face the challenge of making external dynamics transparent and optimally designing their performance measurement system (Reynolds *et al.*, 2005; Homburg *et al.*, 2012). In this context, "performance measurement" is defined as the quantification of efficiency and effectiveness from different perspectives (Neely *et al.*, 1995) and aims to demonstrate adaptive foresight (Zeithaml *et al.*, 2006; Skiera *et al.*, 2011).

Considering various perspectives on performance means including multiple market-related metrics. In decentralized companies, management control needs to be flexible to cover unpredictable events on the one hand. On the other hand, the standardization of performance measurement helps to complete store goals in line with corporate strategy

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throughout the company (Chenhall, 2003). However, the extent to which information on performance is relevant to retail store managers who handle in-store-related challenges along with predefined top-down decisions is not fully clear (Dehoratius and Raman, 2007; Mintz and Currim, 2013). In order to optimally support store managers in their practices, facilitate their decision making at the store level and not overload them with information that they will not consider, we need to gain further insights[1]. By focussing on the interface between information dissemination and interpretation, we aim to open up new practice theory contributions on management control and performance measurement used in complex environments. Therefore, we pose the following research question:

RQ1. How does the contingency factor "external environment" influence the use of operational performance metrics on a retail store management level?

In this paper we are principally concerned with how environmental impacts influence retailers' management control systems. We contribute to contingency theory approaches by focussing on a single, service-oriented industry. The underlying research design supports the understanding of specific needs in an industry in which influences from the external environment, e.g., seasonality or diverse business tasks, are persistently shaping daily routines (Fraser and Zarkada-Fraser, 2000). Moreover, we expand the operational performance measurement literature by evaluating the importance of intangible factors on performance measurement design at the store management level (Fraser and Zarkada-Fraser, 2000). Finally, we provide insights into differences in management control understanding. An extensive literature review shows that the German-speaking research community has differentiated itself from the US management control literature for a long time (Schäffer, 2013). As a consequence, it is necessary to understand the differences and the similarities in management control practice in both contexts (Reinecke and Reibstein, 2002). By applying the same interviewer guidelines for market-leading retailing companies in two national settings, we can extract cross-cultural differences in performance measurement use.

Our research findings show that reported performance metrics depend on underlying store-specific goals and corporate strategies. In the US context, top management reflects environmental changes in its operational goals and regularly communicates financial and nonfinancial indicators to the retail store level. In the German-speaking context, however, product-specific financial information is most relevant. In fact, nonfinancial information on environmental changes is hardly provided. At the individual level, we found that retail managers accept and regularly apply performance reports as information sources in each context. Especially, turbulence and unpredictable events drive store managers to demand more flexible performance-reporting procedures. Moreover, they require comprehensiveness in performance measurement design to facilitate insight building regarding in-store activities. Finally, a hostile working atmosphere induced by reported performance metrics could lead to subjectively perceived information overload, demotivation and destructive behavior. Consequently, information dissemination must also be adapted according to store managers' need to defuse the negative effects of performance measurement.

Our paper is organized as follows: first, research findings on the environmental impacts on performance measurement design and the use of performance metrics are discussed. Second, we present the underlying research methodology. The study undertook an exploratory method to identify the contingency effects on the management control of retail managers. Third, content analysis depicts the information

dissemination processes and the relevance of performance measurement in daily routines. Finally, we present our findings in terms of rigorous and relevant attributes. In our conclusion we suggest avenues for further practical and academic discussion and end with the limitations of the study.

Performance measurement in retailing literature: an evergreen field in retailing

Operational performance measurement design in marketing

Since the 1960s, when Little (1969) introduced marketing decision support systems for the first time in academic literature, researchers have been interested in marketing performance measurement design. However, the accountability and provision of valid, reliable, timely and relevant information is still a hot topic (Merchant and Van Der Stede, 2012). Experts' opinions differ in regard to which metrics to choose in a vast range of potentially available marketing performance metrics (Prajogo, 2006; Marketing Science Institute, 2014-2016). More precisely, they are looking for an appropriate set of metrics that provides a certain breadth, defined as the variety of financial and nonfinancial measures, and a certain scope, defined as the number of relevant metrics. Ideally, this set of metrics addresses different organizational levels, processes and functions (Homburg *et al.*, 2012); visualizes market dynamics from multiple perspectives; and maximizes the accuracy of knowledge (Farris *et al.*, 2010).

Impact of environment on performance measurement design

Based on the contributions of Khandwalla (1977), "environment" is an established construct in the contingency theory literature (Chenhall, 2003). Combining internal (inner corporate) and external (outer corporate) environmental elements (Waterhouse and Tiessen, 1978), the construct summarizes all changes and market dynamics that are hardly predictable and generate uncertainty ("turbulence") (Child, 1975). At the retail store level, it refers to the diversity in product and service provision as well as the varying communication in terms of performance measurement (Kumar and Karande, 2000). Moreover, it deals with changing customer needs ("diversity"). It discusses how often companies have to adapt their marketing and service technology to stay competitive in the market and cover the complexity of retailing business in their performance measurement design ("complexity") (Mintz and Currim, 2013). High stress level, suppression and restrictions also shape working environment ("hostility") (Banker *et al.*, 1996). To sum up, the retailing sector fully comprises Khandwalla's (1977) dimensions of the environment construct. As a consequence, it represents an optimal context for evaluating environmental effects on performance measurement design (Table I).

According to contingency theory, performance measurement design should reflect retail business tasks as well as external environmental dynamics at the organizational level. If environment and performance measurement design fit, efficient resource

Table I.
Definition and description of external environment

Description of external environment (Khandwalla, 1977)	Generic definition according to Chenhall (2003)
Diversity	Variety in products/inputs/customers
Complexity	Rapidly developing technology
Hostility	Stressful/dominating/restrictive working atmosphere
Turbulence	Risky/unpredictable/fluctuating/ambiguous situations

allocation and improved (overall) business performance are the consequences (Chenhall, 2003; Homburg *et al.*, 2012). Although environmental factors have always been intensively discussed in the performance measurement literature, construct operationalization differs. Moreover, the impact of environment on performance measurement design is not fully clear (Horváth, 2011; Mintz and Currim, 2013). The following research development discusses this assertion in depth.

Starting with Cottrell (1973), research studies have investigated the relationship structures between external and internal environmental factors and store performance. Kumar and Karande (2000) evaluated performance variations at the retail store level using market- and productivity-based measures and showed that internal and external environment significantly explained the variation in store sales across grocery stores. In contrast to that, Homburg *et al.* (2002) studied how customer diversity, store characteristics and external environment influenced service orientation and store-level performance and found that competitive intensity did not play any significant role. Different operationalization of the environment construct could be the reason for such contradicting results.

With a focus on planning and decision tasks at the individual level, Mintz and Currim (2013) stated that contingency factors such as business strategy, corporate structure and level of competition affect the priorities of a firm, abilities of managers and, consequently, performance measurement design. Banker and Mashruwala (2007) also addressed performance measurement design and showed that incorporating nonfinancial measures is likely to lead to better financial performance in highly competitive retail environments. However, the provision of nonfinancial measures is unlikely to have any impact on financial performance in low-competitive locations. As a consequence, comprehensive information is needed in highly competitive and turbulent markets (Artz *et al.*, 2012; Chenhall, 2003).

What is missing still is the consistent operationalization of the environment and performance constructs in the marketing literature. Moreover, to the best of our knowledge, the impact of environment on performance measurement use has never been explored in an operational context.

Role of performance metrics in retailers' daily practices

Performance measurement – as a tool of management control – is embedded in the daily practices of individuals and, therefore, has to be literally used to unfold its positive effects. "Management control is grounded in the power of senior managers to set agendas, the management control systems through which they seek to structure organizational practices, and the responses of organizational members. As a structure of intentionality, management control is constituted in cognitive processes that are distributed over people, practices, arrangements and contexts" (Ahrens and Chapman, 2007, p. 22). In this context, practices can be defined as the recurring, structured behavior patterns of organizational members who execute organizational tasks (Feldman and Rafaeli, 2002; Schatzki, 2006). Practices force social interaction between agents, e.g., store employees and store managers, in structured, temporal sequences. Those interactions consequently build corporate structure and role understanding (Feldman and Orlikowski, 2011). Previous experience and repetitive execution induce learning effects and, ideally, result in higher expertise in the long run. With the focus on performance measurement, positive effects occur from higher accuracy and understanding of the delivered information. However, negative effects could arise if employees ignore environmental changes or influences in decision

situations (Pal *et al.*, 2011). Then, routines could be seen as "competence traps" (Kaplan and Orlikowski, 2013). To gain first insights into how performance metrics are integrated into the daily decision making of retail store managers, we applied the following qualitative research design.

Methodology

Research setting and data collection

Previous research findings give a profound starting point to better understand environmental impacts on retail management. However, identified research gaps call for an explorative research design to drive further theory building (Yin, 2014). In this regard, problem-centered interviews adopt a communicative strategy, meaning, the process of speaking provides a way to discuss and analyze a research problem. Problem orientation addresses: first, the research problem itself; second, the appropriate methodological approach; and third, the process of identifying answers and interpreting results at the subject level. Hereby, we included economic, social and organizational characteristics to fully understand the research object and its context (Witzel and Reiter, 2012).

First, we identified relevant research topics based on the results of an extensive academic literature review and discussions with retailing practitioners. For the foundation of our research design, we used underpinnings from contingency theory (Khandwalla, 1977) and practice theory (Feldman and Orlikowski, 2011). Second, we formulated two versions of question guidelines, written in German and English, to address different cultural contexts and draw comparable corporate frameworks. Both versions differed in terms of language but not in terms of content. Afterward, we tested both guidelines in two pretests. During March and August 2013, we selected 22 retail companies based in California and Austria. Those research settings represented highly competitive retail markets but were chosen to provide different understandings of performance measurement (Schäffer, 2013). We mainly focussed on market-leading companies, as we hypothesized that successful market players would fulfill similar business tasks and provide performance measurement systems as communication tools in their business routines. Table II gives an overview and key characteristics of the industry, amount of branches and level of position.

A mix of homogeneity and heterogeneity contributes to the characteristics of theoretical sampling (Glaser and Strauss, 2012). Thus, we selected interviewees from

Table II. Data collection according to theoretical sampling

	California, USA				Austria, Europe		
No.	Retailing sector	Branches	Position	No.	Retailing sector	Branches	Position
1	Grocery	~400	Store manager	1	Grocery	> 2,000	Top manager
2	Grocery	> 400	Store manager	2	Drug store	> 600	Store manager
3	Fashion	> 30	Store manager	3	Office products	> 100	Store manager
4	Fashion	> 200	Store manager	4	Fashion	> 200	Store manager
5	Fashion	~800	Employee	5	Drug store	~400	Store manager
6	Drug store	> 8,000	Store manager	6	Fashion	> 100	Store manager
7	Office products	> 1,000	Store manager	7	Fashion	> 100	Store manager
8	Office products	> 1,000	Store manager	8	Building equipment	> 50	Store manager
9	Office products	> 1,000	Store manager	9	Grocery	> 2,000	Store manager
10	Fashion	= 2	General manager	10	Fashion	2	General manager
11	Food retailer		Top management	11	Grocery	> 1,000	General manager

different retail sectors and hierarchy levels with the focus on store management. Moreover, different company sizes were taken into account. Consequently, we were able to distinguish between the routines of larger and smaller companies in our analysis. Based on the interview guidelines, interviewees started with a description of their daily business routines. Afterward, they discussed the decision-facilitating functions of performance measurement as well as their individually perceived relevance of performance metrics. The interviews ended with questions on reporting periods and an outlook for further developments. Throughout the interviews, we emphasized narrative structures (Witzel and Reiter, 2012). Table III summarizes the key characteristics of the research process.

Data analysis

For the analysis, generated data were reflected in their context of origin in the first step. We transcribed interviews and connected audiotapes with written transcripts in Atlas.ti, a qualitative data analysis tool. Moreover, we used field notes, interviewer protocols, information on corporate reports that interviewees showed us during the interviews and information from websites to gain further understanding of corporate strategy and strategy implementation at the store level. Second, we developed categories that combined the reference to objects and to established theory. Based on a systematic process model, generalization codes and reduction codes were based on contingency and practice theory considerations and generic definitions (Table IV). Third, we followed a summarizing form for content analysis that was mostly based on deductive categories (Mayring, 2004). We coded all interviews in English so that the cultural context in which the code was generated was not obvious to the analysis team.

Findings

Operational performance measurement design and reporting frequency

First, we present operational performance metrics to better understand which of them are relevant for decision making at the store level. On the financial side: first, store managers declared sales and volume the "Number 1" metric. Second, occasionally mentioned were product-related metrics such as margin and profit reports, which are used to identify profit drivers in categories; third, stock level, which is used to identify shrinkage and out-of-stock items; fourth, price and promotion analysis, which is used to strengthen negotiation positions with top management and suppliers; and fifth,

Characteristics of qualitative design

Subject of investigation	Implementation of performance metrics in retailing
Unit of analysis	Retail practice on the sales floor
Theoretical underpinnings	Contingency theory (Chenhall, 2003), practice theory (Feldman and Orlikowski, 2011)
Methodological approach	Problem-centered interviews (Witzel and Reiter, 2012)
Data analysis method	Content analysis (Mayring, 2004)
Software support	Atlas.ti7
Interview sites	California (USA), Austria (Europe)
Interview period	March-August 2013
Sampling method	Theoretical sampling (Glaser and Strauss, 2012)
Sample size	$n = 22$

Table III.
Characteristics of qualitative design

Description of external environment (Khandwalla, 1977)	Coding scheme (problem-centered interviews)
Diversity	Diversity of business tasks
	Diversity of performance measurement
	Diversity of seasonal needs
	Diversity of shoppers
Complexity	Complexity of retail business
	Complexity of information technology
Hostility	Hostility because of high stress level
	Hostility because of suppression at the individual level
	Hostility because of restrictions
	Contradiction: friendly atmosphere
Turbulence	Turbulence because of a risky environment
	Turbulence because of unpredictable events

Table IV.
Coding scheme – problem-centered interviews

turnover, which is used to figure out best- and slow sellers. Sixth, product returns and seventh, transaction-based metrics were also reported to be relevant for reflecting financial customers' perspective. Eigth, especially in the US context, store managers reported taking productivity measures to schedule employees and ninth, conducting, analysis of labor costs to evaluate store performance.

On the nonfinancial side, customers' perspective dominated the discussion. Interestingly, statements on nonfinancial metrics were more present in the US context: first, mystery shoppers and receipt trackers were reported as instruments used to regularly measure customer service. Second, reports on customer contact were seen as crucial for evaluating shopping behavior in the store; US store managers analyze at which time of day shoppers visit their store, how long customer interaction takes and which conversion rate the store generates. Third, in the long run, retailers aim to build loyal customer relationships in both national contexts. Reports on the amount of active loyalty cards or store-released credit cards help to gain insight into this topic. Fourth, in terms of complaints, many retailers take a zero-tolerance policy. If complaints still continue to arise, direct feedback and intense evaluation of employee performance would be the consequences. From an internal perspective, US retail managers use subjective, and therefore softer, measures to evaluate, fifth, the attractiveness of the assortment; sixth, appealing product placement; and seventh, additional product offering. Furthermore, eigth, level of competence and know-how, ninth, personal attributes – such as punctuality, appearance, personality and the degree of friendliness in customer interactions – and tenth, teamwork were reported behavior measures for employee performance. These soft metrics were seen as important for decisions on individual feedback sessions.

Analysis shows that product-, customer- and employee-related metrics were addressed in each setting and every sector. However, importance and reporting frequency of metrics varied according to store goals. In the US context, where store goals equally combine financial as well as nonfinancial aspects of performance, several retail store managers underlined that they would immediately react to unpredictable events based on performance reports and provide direct feedback to their employees throughout the day if they lagged behind store goals. On the contrary, some Austrian managers stated that they would only consider reports if overall store performance was weak because they often did not have time to evaluate performance in depth. However,

in both national contexts, sales reports, which show performance according to plan, and out-of-stock reports, which identify inefficient order practices, were reported as the most relevant and frequently used on a daily basis.

On a weekly basis, employee and store performance are evaluated more deeply when district managers provide feedback and benchmarks. Moreover, performance on diverse merchandise products was of interest. Monthly, store managers get to know internal performance rankings, mystery shopper evaluations on customer service and margin analysis. Finally, only once or twice a year, Austrian store managers focus on customer satisfaction evaluations. Compared to the USA, where one store manager even emphasized ranking customer satisfaction as the "Number 1" metric on a daily basis, this finding was quite surprising.

To sum up, financial metrics are important in both national retail contexts. Austrian store managers highlighted financial metrics because overall sales and inventory management build leading corporate goals. However, nonfinancial metrics are more relevant and more often reported in the USA, where information on customers and individual employee performance is communicated at the employee and store management level.

Subsequently, the question arises as to how those metrics fit into daily retail practice. We found that basic retail functions formed store managers' tasks and enabled analysis beyond retailing sectors. One US store manager at an office retailer said, "Retail is just retail. It's basic stuff. This is not rocket science. I've run multiple pharmacies. I don't know anything about dispensing drugs. […] But it's no different than somebody at my copy center who has a customer and takes care of him. It's just a basic function." Another store manager at a fashion retailer puts it this way: "Actually, I think pretty much every retailer runs the same way. […] These are all the same metrics wherever I have gone. There is nothing different." All in all, store managers acknowledged that dealing with performance metrics is essential to manage a retail store. Differences in performance measurement practices among the sectors are negligible. Next, we will focus on the environmental impacts on performance measurement use.

Diversity

Prioritized through corporate goals, store managers combine diverse responsibilities during a working day. Besides management tasks, they organize product-related tasks, immediately react to unpredictable events and interact with shoppers. One store manager, working with office products in the USA, noted, "Every week is a different week, and we let the employees know: 'These are your goals on this. Then you meet your goals on this.' And if they didn't [meet the goals, we tell them] what they can do differently." This quote demonstrates that store managers and their employees need to stay flexible in job routines and performance analysis.

To decide on store-specific concerns, store managers reported combining diverse reports to gain a "bigger picture" of store processes and to identify weak performance. Besides formal information provided by performance reports and mainly edited in spreadsheets, store walks and direct interaction with store employees were reported as being used to build a crucial, informal information base in both national contexts. Those management practices show that diversity in performance analysis is crucial in daily routines.

Even though interviewees confirmed that performance measurement is important, they criticized that uncontrollable external factors influence outcomes at the same time.

Expressed pointedly, one US store manager said, "The numbers of the store are important to the company, but they don't take into consideration that there are so many other factors that contribute to whether you get those numbers or whether you don't." Discussed in several contexts, seasonality is one dimension of diversity that significantly shapes processes and reported performance metrics. Besides seasonal job tasks, e.g., changes in store design, store managers have to plan, order and implement seasonal products that are either based on previous year's sales figures or – if not available – on intuition. Furthermore, they schedule staff according to seasonal needs based on store visit reports and available personnel resources. Partly, store managers are allowed to decide on price reductions and other assortment changes, but sometimes this is a company affair exclusively. In this regard, one store manager criticized that he was not allowed to react to shoppers' seasonal needs even though he had the informal knowledge of what they wanted.

Besides seasonal trends, customer diversity influences the use of performance metrics. This dimension was mainly discussed in the US context; store managers mentioned that shopping behavior is hardly predictable. Nevertheless, they try to derive store activities based on shopper insights. Not only are shopping day and time intensively evaluated to deduce staff schedules, but also reasons for product returns are of particular interest for store managers. However, they criticized that product return reasons are rarely communicated in a formal way. Finally, store managers pointed out that they provide their staff with feedback, feed-forward suggestions and training sessions according to corporate goals to adjust to shoppers' needs and interests. Employee performance on customer satisfaction is regularly provided via short customer surveys subsequent to purchases and transaction-based evaluations. Those reports are necessary for store managers to build long-lasting relationships and sustainable profit.

Complexity

"Complexity" refers to retail store managers' perception of retail business in general and the evaluation of diverse retail job tasks in particular. In the grocery business, a US store manager put it this way: "Being a manager of a grocery store […], there is a lot more involved than people might think. People might think it's just running a grocery store. But there is a lot more to it than just running a store because of all the metrics you have and the customers you deal with every day." Ideally, one's "business is running without problems," but "retailing is the way it is," an Austrian manager sarcastically pointed out. Taken together, the interplay of customers, employees, suppliers and inventory management that should be reflected by performance metrics creates business success. However, interpreting various perspectives challenges the cognitive capabilities of individuals. One store manager mentioned, for example, that it is too complicated for her to evaluate and understand promotion analysis. As a result, she relies on sales reports only. Furthermore, store managers perceived employee management as particularly complex and time-consuming: On the one hand, they should evaluate the performance of customer interaction and product- and transaction-related tasks of each employee as objectively as possible. On the other hand, store managers' perception and subjective employee performance metrics build the most important decision base because objective operationalization is not available in most cases.

By analyzing the perceived complexity of retail management in depth, we also found context-specific differences. Austrian managers saw a deficit in competent staff. Due to strict budgetary restraints, they often pay their employees minimum wage, which leads

to understaffing situations and high fluctuation rates. However, they underlined that competent employees are necessary to fulfill basic retail tasks and guarantee high performance standards. In the US context, store managers discussed complexity while identifying profitable store locations. They criticized that, in highly competitive environments, less attractive store locations can lead to significant financial disadvantages when it comes to bonus distributions. Therefore, they wanted location-based adaptions included in their performance compensation system.

An analysis of how information technology (IT) influences the use of performance metrics is a discussion for itself. However, some statements addressed the perceived complexity of using IT for performance measurement tasks. In general, technological improvements should facilitate task completion and support store managers in making their decisions and generating store sales. In the US context, for example, store managers of large-store formats used dashboards and alert systems with traffic light functions to visualize store performance developments and reduce information complexity. Moreover, ordering processes have changed from using manual lists to electronic support. However, a store manager criticized that, although provided, he does not use the implemented IT that would support management tasks in his daily work because it is too complex for him.

Hostility

"Hostility" comprises situations in which store managers and employees feel constant pressure. In this regard, a stressful working environment was first discussed. Many store employees perceived companywide performance rankings and sales goals meant to motivate individuals as being stressful. One sales associate, employed in a US fashion company, criticized, "If you are not pressured with those numbers, then it's a lot more like a calm and chill environment to work in. But I hear so many stories, like, people fight[ing] over sales in front of the customers." Especially in the US context, the reporting of employee-related performance metrics is a daily task for store managers. However, this could lead to a high level of competition and rivalry among employees, departments and branches.

This is not the case in the Austrian context, where reports mainly address overall store performance. However, Austrian interviewees claimed that they are overloaded with basic retail tasks and constantly feel time pressure. Some statements revealed that store employees do not have any time to interact with shoppers or take breaks on busy work days. Other quotes showed that store managers either analyze store performance reports in their leisure time or sometimes even ignore them. One manager criticized, for example, that she should control every incoming delivery but could not do so because of time restrictions. Another hostile working atmosphere was depicted by one fashion retailer in Austria. She explained that mystery shoppers evaluate store performance on a monthly basis. Paradoxically, the results are not intended to be communicated to store employees. Even though the store manager could easily give her employees feedback and train them to behave in a more service-oriented manner, top management does not want her to do so. Taking those examples together, we see that much of the information that is available at the store level is neglected because of a hostile working atmosphere.

Second, external restrictions build up a hostile working atmosphere and affect the use of performance measurement. The main critique in this regard relates to the legal restrictions on employees' working hours. Besides legal standards, strict corporate targets and guidelines lead to accurate calculation of personnel costs. Store managers

face the challenge to keep those restrictions and calculations in mind and, thus, schedule employees for tasks they are good at.

Third, small retailers perceived daily business and working atmosphere as nice and easy going because they do not have to meet expectations in a strict way. This position contrasts with the previous discussion in this section.

Turbulence

"Turbulence" summarizes statements that refer to market developments and unpredictable events. During the interviews, more experienced store managers mentioned that they had seen ups and downs in company performance during their careers. The recent financial economic crisis was explicitly addressed in this context. Since 2008, top management has undertaken profound restructuring activities, which have led to significant changes in in-store activities and performance measurement. At the moment, neither long-term forecasts nor schedules are possible. Consequently, store managers need to plan on a weekly basis. "Back in the day, before the recession, we planned two weeks, three weeks [ahead], though now, because of the recession from 2008, our companies have gone to weekly planning because they cannot forecast that fast anymore." Reports even provide store managers with information on goal completion on a daily or even hourly basis in some cases. Moreover, they show deviations from past results and forecasts for the future to facilitate decision making. All in all, store managers need to react immediately to reports if store performance is weak. However, they acknowledged that business success could only be reached if store managers and their employees jointly deal with turbulent developments. A US manager, working in the fashion industry, explained, "If employees are not agreeing to the change, that's not good. They need to be able to change with the times."

Discussion

In the operational business context, retail store managers balance an understanding of their own role, the boundaries of corporate standards and the needs of various stakeholders (Oberparleiter, 1918; Johlke and Iyer, 2013). In this triangle, both the external and the internal environment significantly influence retail practices. Store managers and their employees, who are confronted with diverse, complex, hostile and turbulent situations on a daily basis, regularly analyze performance metrics to evaluate those dynamics. On an aggregate level, we have learned that multidimensional store processes and environmental changes are closely interwoven and therefore need to be interpreted as a single entity. In contexts where dynamics are routine and stability is rare, performance measurement has to learn to react to those specific environments and start to be flexible (Schröder and Geiger, 2013). This helps to identify trends and allows adaptive foresight (Zeithaml *et al.*, 2006).

In retailing, where decentralized organizations dominate the market scenery, the standardization of reported performance metrics helps to provide uniform external service orientation (Homburg *et al.*, 2002; Chenhall, 2003). With a focus on service-oriented industries, we found similarities in retail management in all researched settings. Store managers follow corporate goals and, consequently, try to maximize store performance. However, they called for comprehensive performance measurement and more flexibility in decision making to immediately react to environmental needs.

Besides similarities, we also identified significant differences between national settings. These differences cannot be derived exclusively from different understandings of performance measurement itself (Schäffer, 2013) but also from

different strategic orientations (Mintz and Currim, 2013). Retailers implement a comprehensive set of performance metrics to reflect a more customer-oriented business strategy in the USA. In this setting, store managers mainly fulfill control and managing tasks. Moreover, they analyze and interpret store metrics, evaluate the degree of goal completion at the store and individual level, and provide feedback as well as feed-forward sessions. In the Austrian context, however, retailing companies follow a more service-efficient strategy. Store managers seem to be overloaded with basic retail responsibilities and therefore focus on a few metrics only. We also found evidence that they sometimes even ignore management control tasks. Addressing the use of performance measurement, they heavily rely on generated sales figures to fulfill efficiency standards. Nonfinancial metrics are rarely analyzed, and leading indicators are hardly implemented at the store level. However, the management control literature criticizes that focussing on backward-looking performance metrics is like looking in a rearview mirror, which could result in a competence trap and therefore needs to be eliminated (Kaplan and Orlikowski, 2013; Zeithaml *et al.*, 2006).

In the long run, learning effects can evolve if store managers see performance measurement and related technological support as useful and not complex. Training in the areas of responsibility could help to sharpen understanding, optimize the interplay between stakeholders and reduce negative word of mouth (Harris and Ogbonna, 2013). Especially in the Austrian context, store managers and their employees perceived employee management as complex and hostile. If these stakeholders could be positively motivated, higher employee satisfaction may result (Johlke and Iyer, 2013).

To sum up, we present the following practical implications: first, retail activities and information supply should react to the dynamics and complexity of the retail market with adaptive processes and a broad scope of reporting (Homburg *et al.*, 2012). Nonfinancial metrics provide a crucial information base to reflect shopper and economic trends and therefore should also be implemented at the store level. Second, objective metrics should be extended with subjective evaluations and individual process controls (Chenhall, 2003; Demski, 2008). This kind of self-guidance and strengthened authority of store managers would help to gain holistic knowledge of store performance and allow store managers to react more flexibly to unpredictable events (Horváth, 2011). Third, we propose further implementing IT software that supports store managers in their complex decision tasks. During the interview process, we were introduced to various exceptional reporting tools, ordering tools and scanning tools, to name a few. Those technologies were only mentioned in some larger retail store formats but would help managers in their decision making in all contexts. From a retailer's perspective, it is feasible to use implemented IT to generate operational metrics at various levels and provide store performance from various angles. Finally, we found that information and task overload could be reasons for neglecting performance information. In this regard we see potential in installing training tools to underline the relevance of performance measurement in a sustainable way. Moreover, processed information reporting, e.g., dashboards, could help store managers interpret metrics more easily.

Conclusion

Widely accepted in the contingency literature, environmental aspects influence business activities and performance outcomes (Chenhall, 2003). However, focussing on research studies that deal with performance measurement in retailing contexts reveals contradicting results. Varying definitions of the environment construct could be one

reason for the divergent findings. Different theoretical understandings of performance measurement could be another.

First, we summarize the findings on the environment construct. For the study at hand we used Khandwalla's (1977) definition, including the dimensions of diversity, hostility, complexity and turbulence. The underlying explorative research design made it possible to unravel different perspectives on environment in operational retail settings. We focussed on larger retail companies with multibranch and department structures and compared retailing activities and the handling of operational performance metrics. To give a summary overview, Table V provides the key findings and their effects on performance measurement.

Our results show that basic retail functions and processes were similar in the analyzed contexts. Furthermore, reported performance metrics were the same. However, we were

Category: external environment	Key results	Consequence for PM design in retailing
Diversity	Task diversity leads to diversity in reported performance metrics during a working day. Performance metrics reflect the responsibilities of employees (mainly USA) Seasonality leads to changes in store processes and performance evaluation (both contexts) Diversity in shopping behavior leads to implementation of customer-oriented performance metrics (mainly USA)	At a business unit level, implementation of nonfinancial metrics and subjective evaluation improve store performance in retail environments At an individual level, flexibility in reporting processes leads to improved decision making and store performance
Complexity	Store managers perceive implementation and interpretation of various performance metrics as complex (both contexts) Store managers perceive their work as complex because they have to Organize business tasks and in-store logistical processes with limited personnel resources (mainly AUT) Deal with changes in IT (mainly USA) Deal with challenges resulting from top-down location decisions (mainly USA)	At a business unit level, the perceived complexity of retail store tasks and processes calls for comprehensiveness of performance measurement sets At an individual level, the perceived complexity of report content leads to information overload
Hostility	Cost orientation in business tasks leads to suboptimal customer service and suboptimal management control (mainly AUT) Pressure caused by reported performance metrics demotivates employees and leads to high fluctuation rates (both contexts)	At a business unit level, the implementation of formal, financial-oriented control systems is dominant in cost-oriented companies At an individual level, hostility leads to neglecting reported performance metrics
Turbulence	Weather conditions and economic crises lead to short-term planning cycles (both contexts)	At a business unit level, the implementation of flexible control systems leads to improved store performance At an individual level, store managers need to be authorities in their stores to immediately react to turbulence

Table V.
Key results and propositions

limited to the statements of our interviewees. It would be interesting to evaluate operational performance measurement on a broader scale and, therefore, empirically assess the effects of external environment on performance measurement design.

Following the underlying research question, we explored the connection between business tasks and performance measurement use. Contingency and practice theory helped to gain insights into the subjective evaluation of the perceived relevance of performance metrics and overload situations. However, we did not learn anything about the objective decision quality or decision accuracy (Caliskan Demirag, 2013). Further analysis should therefore focus on sustainable effects and consequences of performance measurement use.

Second, we draw our conclusion on cross-cultural effects. An extensive literature review revealed that the German-speaking research community has differentiated itself from US management control literature for a long time (Schäffer, 2013). As a consequence, it was necessary to understand and reflect basic differences in management control practices in both contexts. The analysis shows that reporting frequencies and use of performance metrics vary. However, we cannot ultimately make clear statements about the causality of cross-cultural differences, strategic orientation or use of performance measurement. However, the underlying research design has helped to give first insights into cross-cultural differences. Further quantitative research needs to clarify those results. Moreover, we only presented store management insights at the moment. To learn more about strategic decision making, future research should also focus on top managers' perspectives on strategic as well as operational performance reporting.

By focussing on market-leading retailers in different national contexts, we could approach academic publications and challenges in retail practice in a novel way. However, we acknowledge that comparison of two completely different economies is always challenging. We aimed to reflect not only linguistic subtleties but also differences in the legal systems and market restrictions. We also identified other contingency factors, e.g., store size or amount of employees, that play a significant role in retail management. Those factors need to be taken into consideration in future research.

Note

1. Besides a decision-facilitating function, which refers to planning and decision-making tasks, performance measurement also fulfills a decision-influencing role, which "relates to the role of accounting information to incentivize and control employees" (Artz *et al.*, 2012, p. 446). For the ease of understanding, we only focus on one perspective, namely the decision-facilitating function of performance measurement.

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