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An Analysis Model for Performance Measurement of International Trade Fair Exhibitors¹

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Abstract

The paper contributes a multidimensional analysis model to the issue of performance measurement of International trade fair exhibitors. First, it proposes an integrated trade fair performance evaluation model. The model incorporates the process of firm activities, from before to after the fair. A performance measurement construct is developed that employs quantitative and qualitative variables, and includes immediate and delayed measures of exhibitor performance, thereby recognizing the importance of the trade fair management process. Second, the paper examines the relationship between firm activities and trade fair performance levels to demonstrate that multiple measures provide valuable insight into the trade fair exhibiting process. The analysis model is applied to a data set from a Canadian study of 303 firms exhibiting at international trade fairs.

Introduction

Trade fair performance measurement has been fragmented and haphazard and, as trade fairs have come under increased scrutiny by researchers in recent years, more attention is warranted (given the substantial budget allocations companies make to these marketing activities) to redress this shortcoming in analysis methodology. In recent years, academic researchers have focused their conceptual and empirical attention in several areas, including visitor motives and interaction with exhibitors (Hansen, 1996; Manuera & Ruiz, 1999; Rosson & Seringhaus, 1995); exhibitor management and performance (Kijewski et al., 1993; Tanner & Chonko, 1995); effectiveness of trade fair expenditures (Gopalakrishna & Lilien, 1995; Gopalakrishna et al., 1995); and comparative research on trade fairs across industry sectors and nations (Dekimpe et al., 1997; Pfeiffer et al., 1997). A feature of most of these studies is the quest for better conceptual foundations and more valid measures. This paper continues in this vein: it attempts to develop a more realistic, multidimensional analysis model for evaluating exhibitor trade fair performance and then examines the relationship between various company activities and trade fair performance. The analysis model is applied to data from a study on Canadian companies exhibiting at trade fairs around the world.

Literature Review

We review the work of academics and practitioners who have examined the question of trade fair performance and how it might best be evaluated. This is followed by a discussion of the company-controlled activities that are regarded as influencing trade fair exhibit results.

Evaluating trade fair performance

Companies participate in trade fairs with the expectation of some benefit (Sashi & Perretty, 1992). But what are these benefits? Sales are the ultimate objective of a company's presence at a trade fair and, in some cases, orders are actually written on the trade fair stand. In most industry settings, however, securing qualified leads are the principal objective for the exhibit, to be converted into sales through follow-up activity. In some industries where buying processes are complex and/or purchases involve substantial costs, conversion can take months or even years. Most writers have emphasized the selling aspects of trade fair exhibiting, with one (or a few) performance measure(s) employed. A number of researchers (Bonoma, 1983; Kerin & Cron, 1986) have argued that exhibits also serve non-sales objectives (e.g., testing the market for product accep-

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tance, locating prospective agents or distributors). Such non-sales objectives will usually reflect a company's position in the market(s) reached by the trade fair. Accordingly, market entrants will be more interested in seeking out buyer and distributor prospects, whereas market leaders will focus to a greater extent on monitoring the activities of competitors and solidifying existing relationships. Early writers (Kerin & Cron, 1986) treated non-sales objectives as uni-dimensional. Recently, others have argued that this is unduly restrictive. Shoham (1999), for example, proposes that there are three separate sub-dimensions: gathering information, managing relationships, and psychological activities (morale and image maintenance and enhancement).

Studies on trade fair performance have become more sophisticated over time. Kerin & Cron (1987) grouped companies into high and low performance groups based on selling and non-selling achievements, and then examined the extent to which influences such as industry type, company, and trade show strategy affected performance. Only four of 13 predictors proved to be statistically significant: number of products, number of customers, written trade show objectives, and use of vertical trade shows. Interestingly, these are all trade show strategy factors, pointing to the importance of management actions in producing superior results. Gopalakrishna and Lilien (1995) analyzed industrial trade show performance using a three-stage model reflecting the multi-activity nature of exhibiting. Performance indices were computed to gauge company attraction, contact and conversion efficiency. The influence of several factors on performance was modelled: pre-show promotion, booth space, use of attention-getting techniques, competition, and number and training of booth salespeople. Performance was enhanced by different factors for each of the stages examined. Once again, these results reveal the importance of company-controlled activities in trade fair performance. Dekimpe et al. (1997) extended this work both conceptually and comparatively. An attraction effectiveness index was employed, computed as the number of attendees from the target audience who visited the booth to talk or obtain literature, divided by the size of the target audience. The key determinants of performance were found to be pre-show promotion spending, size of booth, number of personnel per square foot, and use of vertical (as opposed to horizontal) trade shows.

These and other studies demonstrate that trade fair research is 'coming of age'. Starting from a base where descriptive and anecdotal writing prevailed, in recent years research has become more analytical and empirical. Simple views of the role of trade fair exhibits have been replaced by more realistic (multi-dimensional) ideas about the objectives that companies pursue through their participation. This progress has produced a variety of individual measurement approaches assessing trade fair performance and the factors that influence outcomes. It is noted, however, that most studies focus on one or a few performance measures and at a single point in time, thus unduly restricting the evaluation process. Hansen's (2004) work is a notable exception in that he views performance along several dimensions, and examines trade fair exhibiting as a process involving numerous activities. There has been no attempt to develop an integrated analysis methodology. Thus, there is a need for recognizing that performance indicators are both quantitative and qualitative. Moreover, the temporal dimension of both performance and company activities, as well as their relationship, need to be understood.

Measuring exhibitor activities

The process of trade fair exhibiting involves several phases, each comprising numerous activities. The time period involved—from the first notion that a company might exhibit at a trade fair to taking the final follow-up action—often spans a number of years. Good marketing and project management skills are required if a trade fair exhibit is to achieve its goals. Many activities have to be planned and managed and the literature offers many views as well as some research-based findings about appropriate behaviour.

A variety of pre-fair activities are regarded as important to the success of an exhibit. Communication support can take different forms, ranging from the incorporation of relevant information in telephone, fax or mail messages, through the use of press releases, to paid advertising in trade magazines. Each of these avenues enables exhibitors to create awareness among clients, partners and prospects about their presence at an upcoming trade fair. As the trade fair approaches, communications activities intensify, with more direct methods employed to attract key visitors to the exhibit (Dekimpe et al., 1997). Astute companies will rely not only on their own resources but also make the most of ser-

vices made available by the trade fair organizer. On the company side, important prospects might be lured by personal calls from senior management or the provision of free tickets. Companies can also piggyback on the publicity efforts of the fair organizer, for example providing company/product information to be featured in promotional materials of the fair, and distributing stand location maps. Konopacki (1994) describes best practices in this regard. Noble (1994) reveals how one company's new product introduction was enhanced through the attraction of key prospects to its trade fair stand.

Companies exhibit for a variety of reasons. The market situation facing a company will be a primary determinant of its precise fair objectives, which could vary from "awareness creation" at one extreme to "seek new or repeat sales" at the other. Such objectives will shape much of the planning for the exhibit, especially the selection and training of the people who will staff the operation (Gopalakrishna & Lilien, 1995). Bello's research shows that the best results are achieved when there is a close match between the knowledge and skills of booth staff and visitor characteristics and their information needs (Bello & Barksdale, 1986; Bello, 1989). Other research has found that formally trained staff can significantly increase the conversion of targeted visitors to qualified sales leads (Tanner, 1996). These studies support the importance of pre-fair planning activities.

With respect to on-fair activities, research reveals that product demonstrations and presentations are important factors in booth memorability among visitors (CEIR, 1997). In other words, to create a lasting impression, companies need to do more than providing a static display of their wares. The very success of an exhibit produces difficulties since attractive stands generate considerable traffic and require procedures to ensure that contacts are made and leads are correctly identified. Hoshen (1989) provides advice on how to deal with the different types of visitor a booth might attract. Booth personnel must as efficiently as possible identify those visitors who deserve close attention. At some fairs, colour-coded badges are used to denote different visitor categories. This is a good start but it does not solve the problem for exhibit personnel. Although practitioners such as Siskind (1993) speak about the necessity of employing procedures for making contact, determining interest and exploring buying intentions, it appears that relatively few companies follow this advice. Weisgal (1998), for example, surveyed companies at one exhibition and reports that only 24% used a customized lead form to capture such information. These data suggest that lead qualification practices may not be producing the information required for precise sales follow-up after the fair.

In the post-fair phase, a critical task is capitalizing on the potential business that has been identified at the fair. In most cases, companies pursue this business through the regular sales and distribution networks. In other cases, trade fair staff is responsible for pursuing leads further. Whatever the case, timely follow-up is necessary if the 'hot' trade fair lead is not to rapidly 'cool'. One problem in smaller companies is that trade fairs may follow one another in close sequence. Without adequate resources, the pressure of events sometimes prevents completion of the follow-up efforts. A larger resource question also deserves mention. US research reveals that booth size is the prime factor in explaining visitors' memory of specific trade fair exhibits and, thus, may be viewed as impacting on performance (CEIR, 1997). But the scale of a booth also influences the overall cost of an exhibit, since many expenses are size-related (e.g., space, booth, salaries, product shipping). Therefore, the commitment of a company's management to a specific size of booth affects not only the sales performance of a given trade fair, but also the costs (Gopalakrishna et al., 1995; Dekimpe et al., 1997).

The literature shows a fragmented approach to firm activities and there exists a general lack of recognition that temporally differentiated activities are likely to influence trade fair performance in different ways. Hence, a clear understanding of the process phases and distinct activities is needed, that is when they occur and how they are related to performance. In brief, an integrated analytic approach will be used to test two propositions, namely that a) multiple performance indicators are influenced by multiple, temporally diverse firm activities, and b) different levels of performance are associated with different firm activities. Next, we outline the analysis model we use to test these propositions.

Building the Analysis Model

As the literature review shows, several studies recognize that trade fair exhibiting involves a process rather than activity at one discrete point in time. None of those studies, however, has systematically attempted to build this process aspect into analysis. We recognize that the process or time perspec-

tive is relevant in two distinct ways: first, measurement of performance of trade show participation is imperative – a variety of measures are needed to evaluate participation both during and after the show; second, company activities surrounding trade fair involvement – such as preparation, on-fair activities, and post-fair activities are likely to influence the performance. Thus, we suggest that the process and timing of trade show involvement are crucial for management to consider in evaluating the performance and effectiveness of this activity. A useful working model then should include measures of outcomes (performance variables) and measures of company activity (activity variables). (See the appendix for details of variables employed and their derivation.) Moreover, these two sets of variables are expected to show a relationship. The only technique that facilitates the study of interrelationships among sets of multiple dependent variables and multiple independent variables simultaneously is Canonical Correlation (Hair et al., 1998, p. 444). Canonical Correlation is a versatile but robust technique capable of analyzing a wide typology of variables (i.e. it can accommodate any metric variable without strict assumptions of normality). As a next step a performance construct needs to be developed. The outcome (performance) measures need to be dimensionalized, to identify high or low performers. Thereafter, a classification technique may be used to identify which outcome (performance) level is associated with different firm activities. Here we employ Discriminant Analysis to validate that firms can be grouped by performance level based on their activities surrounding trade fair participation. Finally, it is desirable to identify which performance measures might be useful predictors of performance levels. We do this through student-t tests. The working model is shown in Figure 1.

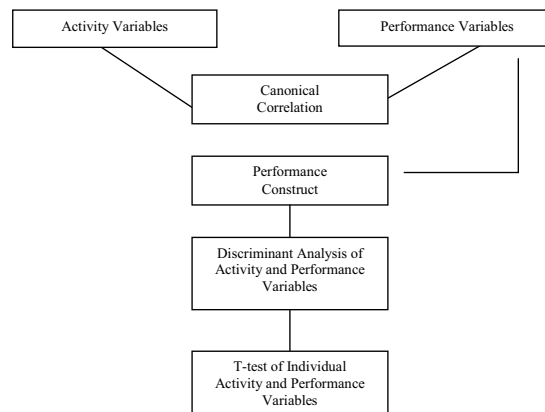


Fig.1. The Multi-dimensional Analysis Model

The variables

Building on the developments outlined above, four types of performance variables are used to more fully reflect the dimensions of trade fair performance.

- Quantitative: variables that represent the objective facts of the performance achieved.
- Qualitative: variables that show behavioural aspects, interpretative or subjective performance indicators.
- Immediate: variables that reflect on-site, measurable aspects of trade fair performance.
- Delayed: variables that reflect performance after the trade fair.

It is important to note that performance outcomes do not only refer to sales but are broad in scope. For example, outcome measurement would include staff effectiveness, degree of objective achievement etc. (Please refer to the appendix for a detailed description of the variables and their measurement). Of the performance measures, some can be immediately assessed while others only become apparent after the fair.

As mentioned earlier, various company activities may influence performance. Twelve variables were measured and grouped in three categories. This reflects the process of trade fair exhibiting, namely they are planned and managed over a period of time. We distinguish between pre-, on-, and post-fair activities. For full details please refer to the Appendix.

| Pre-fair | On-fair | Post-fair |
|--------------------|---------------------------|--------------------|
| Communications | Exhibit events | Prompt follow-up |
| Staff training | Visitor contact procedure | Delayed follow-up |
| Visitor attraction | Visitor tracking | Participation cost |
| Exhibit services | Visitor interest | |
| | Buying information | |

Description of Data Base, Sample and Survey

The database used in this paper is described in detail in Seringhaus and Rosson (2001). The purpose here is to utilize this comprehensive database to demonstrate the application of the analysis model (see Figure 1). In brief, the study of Canadian companies exhibiting at international trade fairs sampled four industry sectors (food, machinery, electrical and electronic, and services) to maximize the diversity of firms and trade fairs.

The sampling frame of the survey was constructed in consultation with the Canadian federal and ten provincial governments and using the Business Opportunities Sourcing System (BOSS)¹ published by Industry Canada, to draw a systematic random sample of exporters. The resulting sample of 1435 established, small and medium-sized companies, yielded a net response rate of 32.6%, or 303 usable questionnaires. A mail questionnaire with pre-test and follow-up was the data collection instrument.

Results

Canonical Correlation

The objective here is to identify the latent relationships between dependent, performance outcome variables and the independent, company activity variables. While bivariate correlations can be analysed for a relationship among pairs for variables, our aim is to show that a broad and general relationship exists between an exhibitor's various activities (pre-, on-, or post-fair) and the outcomes during and after ITF participation, that is the immediate performance measures, as well as the delayed performance measures.

One statistically significant function underlines the existence of the hypothesized relationship: Canonical R of .888 (root .788) significant at $p < .003$, shows that multiple activities are involved in the outcomes from an ITF. Moreover, outcomes of various kinds occurring over a span of time, as opposed to at one point in time, are recognized (Table 1).

To err on the conservative side in the interpretation of the Canonical Analysis results, three measures of the contribution of each variable to the canonical relationships are used. First, standardized canonical weights serve in predicting the relative importance of variables in the overall relationship. Second, loadings show the correlation between individual variables and the canonical variate (i.e. function). Finally, when the squared loadings are expressed as a percentage of their sum, these reflect the proportion of variance accounted for by each variable (Alpert & Peterson JMR, 1972).

We note some difference in the rank order of variables between their relative importance and their correlation with the function. A number of company activity variables stand out: participation costs, visitor-attraction activities, stand activities, visitor information tracking, and staff training. Of the performance outcomes, total leads, staff effectiveness (i.e. # leads per staff), cost per lead, total contacts, and on-site sales are the most noted variables. We note that a core group of activities that are resource-driven (such as participation costs, staff training, stand management and visitor contact activities) are critical to generating desired results (leads, sales, effective staff).

¹ BOSS contains information on more than 32,000 manufacturing and service companies. Statistics Canada estimates that approximately 53% of all manufacturing companies are included in BOSS. However, small and medium-sized companies are under-represented. For example, 70% of all companies with sales in the \$10-\$50 million range are listed compared to 49% of those with sales between \$1-\$10 million.

Table 1

Canonical Correlation Analysis. Company Activity And Performance

| Variables | | Function 1 | | |
|--|-----------------------------|------------|------------|-------|
| | | Weight | Loading | %L* |
| Criterion Set: Performance Outcomes | | | | |
| per 01 | # of contacts | .491 | -.220 | 4.9 |
| per 02 | # of qualified leads | -.998 | -.084 | 0.7 |
| per 1 | On-site sales | -.419 | -.439 | 19.5 |
| per 2 | # of contacts/staff | -.342 | -.163 | 2.7 |
| per 3 | # of leads/staff | .785 | .103 | 1.1 |
| per 4 | Key decision-maker reached | .085 | .029 | 0 |
| per 5 | % leads converted within 12 | -.041 | .225 | 5.2 |
| per 6 | Time to secure sale | .163 | .054 | 0.3 |
| per 7 | Total sales from ITF | -.417 | -.406 | 16.8 |
| per 8 | % sales within 12 mos. | .403 | .444 | 20.0 |
| per 9 | Cost per lead (\$) | -.587 | -.509 | 26.3 |
| per 10 | % of objectives achieved | -.128 | -.153 | 2.3 |
| per 11 | Marketing learning | -.176 | -.043 | 0.2 |
| | | | | 100.0 |
| Predictor Set: Company activities | | | | |
| ACT 1 | Communications | -.196 | -.113 | 1.1 |
| ACT 2 | Staff training | -.356 | -.293 | 6.9 |
| ACT 3 | Visitor attraction | .485 | .013 | 0 |
| ACT 4 | Exhibit services | -.031 | -.235 | 4.5 |
| ACT 5 | Exhibit events | -.418 | -.541 | 23.7 |
| ACT 6 | Visitor contact | .153 | .396 | 12.7 |
| ACT 7 | Visitor tracking | .364 | .417 | 14.1 |
| ACT 8 | Visitor Interest | .132 | .090 | 0.1 |
| ACT 9 | Buying information | -.215 | -.167 | 2.2 |
| ACT 10 | Prompt follow-up | .084 | .202 | 3.3 |
| ACT 11 | Delayed follow-up | -.206 | -.266 | 5.7 |
| ACT 12 | Participation cost | -.537 | -.562 | 25.7 |
| | | | | 100.0 |
| Canonical R | | | .888 | |
| Root | | | .788 | |
| Significance level | | | p = < .003 | |

* Loadings squared and expressed as a percentage of their sum.

The performance construct

The Canonical Correlation model confirms that various firm activities, particularly those at the pre-fair and on-fair stages, influence the group of outcomes that this study defined as performance measures. In order to explore this matter further, two variables were used to divide the sample companies into high and low performance groups. "Total number of contacts" is a measure of an exhibit's ability to get overall attention. This figure reflects the aggregate number of interactions that took place on the exhibit – whether instigated by the seller or visitor. "Total number of qualified leads" is a different measure. It indicates the success of an exhibit in attracting visitors who have buying potential – clearly a more targeted measure of performance. The median scores were used to separate the sample into two performance groups. "High performers" therefore met the requirement of making 80 or more contacts and 20 or more qualified leads, while "low performers" secured less than 80 contacts and 20 leads. Missing values reduced the data set to 180 companies. Summary statistics for the two groups were as follows:

| | | High performers (n = 92) | Low performers (n = 88) |
|------------|-------------|-----------------------------|----------------------------|
| # contacts | Mean (S.E.) | 231.1 (16.9) | 32.6 (2.0) |
| | Median | 200.0 | 30.0 |
| # leads | Mean (S.E.) | 78.9 (11.1) | 6.8 (0.4) |
| | Median | 50.0 | 6.0 |

The high and low performance exhibitors are not distinguishable in terms of general company characteristics. Whether measured by sales or number of employees, company size was not found to be associated with trade fair performance. Similarly, company offering (products versus services), orientation (consumer versus industrial), and technology level (low/average/high) were not related to performance. Industry sector was mildly associated with performance ($p < .10$); machinery and electrical/electronic companies were proportionately over-represented in the high performance group, and food and service companies under-represented. The sharpest contrasts were found with regard to three export measures. High performing companies were more intense exporters, sold in more foreign markets, and had participated in more international trade fairs in the previous three years ($p < .001$).

Classification analysis

Two-group Discriminant Analysis demonstrates a) which performance variables best identify performance levels, and b) which firm activities best discriminate between high and low performers among trade fair participants. Both models show significant discriminant functions (with canonical).

Table 2

Discriminant Analysis: Activity Variables by High/Low Performer

| Variable Name | | Weights (Standard coefficients) | Rank | Loadings (Structure correlations) |
|---|--------------------|---------------------------------|----------------|-----------------------------------|
| ACT 1 | Communications | -.553 | 3 | .104 |
| ACT 2 | Staff training | -.295 | 9 | .056 |
| ACT 3 | Visitor attraction | .308 | 8 | .055 |
| ACT 4 | Exhibit services | -.176 | 11 | -.033 |
| ACT 5 | Exhibit events | .169 | 12 | .179 |
| ACT 6 | Visitor contact | .363 | 7 | .227 |
| ACT 7 | Visitor tracking | .541 | 4 | .290 |
| ACT 8 | Visitor Interest | .467 | 6 | .164 |
| ACT 9 | Buying information | .265 | 10 | .090 |
| ACT 10 | Prompt follow-up | -.503 | 5 | .221 |
| ACT 11 | Delayed follow-up | -.774 | 2 | -.333 |
| ACT 12 | Participation cost | -.906 | 1 | .590 |
| Discriminant equation is significant at the $p < .003$ level, with a canonical correlation of .741. | | | | |
| Classification Matrix | | Predicted: | | |
| | | Low Performer | High Performer | Total |
| Actual: | | | | |
| Low Performer | | 15 88.2% | 5 11.8% | 17 100% |
| High Performer | | 4 13.8% | 25 86.2% | 29 100% |
| Total | | 19 100% | 27 100% | 46 100% |

Classification based on weighted group probabilities; classification accuracy 87.0%, Cpro 53.4%. Cross validation classification accuracy 73.9%.

Table 3

Discriminant Analysis: Performance Variables by High/Low Performer

| Variable Name | | Weights (Standard coefficients) | Rank | Loadings (Structure correlations) |
|---|---------------------------------|---------------------------------|----------------|-----------------------------------|
| per 1 | On-site sales | .069 | 7 | -.128 |
| per 2 | # of contacts/staff | -.545 | 2 | -.704 |
| per 3 | # of leads/staff | -.300 | 4 | -.568 |
| per 4 | Key decision-maker reached | .208 | 6 | .042 |
| per 5 | % leads converted within 12 mos | .397 | 3 | .085 |
| per 6 | Time to secure sale | .243 | 5 | .202 |
| per 7 | Total sales from ITF | .052 | 9 | .090 |
| per 8 | % sales within 12 mos. | .028 | 11 | -.128 |
| per 9 | Cost per lead (\$) | .601 | 1 | .606 |
| per 10 | % of objectives achieved | .037 | 10 | -.133 |
| per 11 | Marketing learning | .059 | 8 | .043 |
| Discriminant equation is significant at the $p < .000$ level, with a canonical correlation of .701. | | | | |
| Classification Matrix | | Predicted: | | |
| | | Low Performer | High Performer | Total |
| Actual: | | | | |
| Low Performer | | 43 86.9% | 5 104% | 48 100% |
| High Performer | | 10 15.4% | 55 86.4% | 65 100% |
| Total | | 53 100% | 60 100% | 113 100% |

Classification based on weighted group probabilities; classification accuracy 86.7%, Cpro 51.0%. Cross validation classification accuracy 83.2%.

Correlations of .741 and .701, and significance levels of $p < .003$ and $p < .000$ respectively). The classification and cross-classification accuracy for the activity model is 87.0% and 73.9%, (see Table 2) and for the performance model is 86.7% and 83.2% respectively (see Table 3).

The Discriminant models underscore the validity of the performance variables used to partition ITF exhibitors into low and high performers. For the activity model, the discriminant weights suggest that participation costs, follow-up, pre-fair communications, and visitor tracking are amongst the most influential variables on which high performers differ from low performers. The discriminant loadings show that these activity variables are strongly correlated with the discriminant function in general.

Table 4

Comparison of Company Activities

| Variable name | | Total Sample (n = 303) | Low Performer (n = 88) | High Performer (n = 92) | Sign. Level 1-tail |
|----------------------------|--------------------|---------------------------|---------------------------|----------------------------|-----------------------|
| Company Activities: | | | | | |
| Pre-Fair: | | | | | |
| ACT 1 | Communications | .56 | .46 | .57 | .002 |
| ACT 2 | Staff training | .70 | .65 | .74 | .014 |
| ACT 3 | Visitor attraction | 3.13 | 2.65 | 3.32 | .001 |
| ACT 4 | Exhibit services | 3.06 | 2.80 | 3.19 | .029 |
| On-Fair: | | | | | |
| ACT 5 | Exhibit events | 1.37 | 1.18 | 1.42 | .024 |
| ACT 6 | Visitor contact | .78 | .72 | .87 | .008 |
| ACT 7 | Visitor tracking | .56 | .50 | .67 | .001 |
| ACT 8 | Visitor Interest | .46 | .40 | .51 | .007 |
| ACT 9 | Buying information | 3.19 | 3.55 | 4.03 | .014 |
| Post-Fair: | | | | | |
| ACT 10 | Prompt follow-up | .49 | .47 | .57 | ns |
| ACT 11 | Delayed follow-up | .09 | .09 | .07 | ns |
| ACT 12 | Participation cost | \$18,900 | \$10,000 | \$55,000 | .002 |

Significance level of difference, T-test, 1-tail, ns= not significant.

Table 5

Comparison of Company Performance

| Variable name | | Total Sample (n = 303) | Low Performer (n = 88) | High Performer (n = 92) | Sign. Level 1-tail |
|------------------------------|---------------------------------|---------------------------|---------------------------|----------------------------|-----------------------|
| Exhibitor Performance | | | | | |
| Immediate: | | | | | |
| per 1 | On-site sales | 4.6 | 3.2 | 6.1 | ns |
| per 2 | # of contacts/staff | 48.7 | 16.9 | 81.1 | .000 |
| per 3 | # of leads/staff | 16.6 | 3.6 | 26.0 | .000 |
| per 4 | Key decision-maker reached | 29.0* | 31.2 | 31.2 | ns |
| Delayed: | | | | | |
| per 5 | % leads converted within 12 mos | 21.6 | 24.8 | 20.4 | ns |
| per 6 | Time to secure sale | 7.9 | 8.6 | 6.7 | .050 |
| per 7 | Total sales from ITF | 301.1* | 345.5 | 316.2 | ns |
| per 8 | % sales within 12 mos. | 79.3 | 72.7 | 88.4 | .007 |
| per 9 | Cost per lead (\$) | 1,361.0 | 1,906.0 | 59.0 | .002 |
| per 10 | % of objectives achieved | 88.0 | 84.8 | 90.0 | .031 |
| per 11 | Marketing learning | 2.13 | 2.14 | 2.15 | ns |

Note: *Mean of total sample differs from mean of sub-samples due to exclusion of missing value cases in the latter.

**Measured by 9 item, three-point scale, 1 = did not contribute, 2 = contributed in minor way, 3 = contributed in major way.

Significance level of difference, T-test, 1-tail, ns= not significant.

For the performance model, the discriminant weights show that the cost per lead, staff efficiency (i.e. # contacts made by staff), lead conversion rate and time, and staff effectiveness (i.e. number of leads obtained by staff) are amongst the most influential variables on which high performers differ from low performers. The discriminant loadings show that these activity variables are also strongly correlated with the discriminant function in general. In Table 4, we examine how much the high and low performance groups differ on individual pre-fair, on-fair and post-fair activities. Ten of the 12 activity variables examined are significant beyond the $p < .05$ level. Visitor attraction and visitor tracking activities show the largest differences, followed by pre-fair communications and participation cost. Other activities that contrast across the two groups are visitor interest, visitor contact procedure, staff training, and buying information, and exhibit events. Exhibit services revealed smaller differences. As expected, better trade fair practices are seen to influence performance. Whether before, during or after the exhibit, high performers more actively plan and manage the trade fair project. One exception is in the area of follow-up activity, where practices were not distinguishable between the performance groups. These results support the idea that good practice is rewarded by superior performance and that trade fair exhibiting requires close attention to many elements, over what is often a protracted period of time.

Finally, we can contrast the difference in performance level based on immediate and delayed outcome (Table 5). This confirmatory analysis shows that the majority of individual performance measures, other than those used to derive the performance construct, differ significantly between high and low performers. It is most notable that the difference is in *people* performance. Namely the sharp contrast in training and organization appears to carry over into performance. For example, staff efficiency and effectiveness among high performers is superior, and carries over into cost management and shorter post-fair lead conversion time. Both performance groups, had high rates of objective achievement, and agreed that the fair participation process was not a source of major marketing learning. The latter point is understandable, as both groups have significant exporting and trade fair experience (percentage of sales exported and number of international trade fairs in past three years respectively was 38.2% and 5 for low performers, 58.3% and 8 for high performers).

Discussion and implications

Our motivation was to offer a more realistic and comprehensive approach to trade fair performance measurement. We set out to develop a performance evaluation model that treats trade fair exhibiting as a process. Data from a Canadian study of trade fair exhibitors provided a substantive data set to test our model. The analysis model showed the relationship between multi-dimensional firm activities and performance measures. Moreover, a performance construct defining high and low performance criteria (number of contacts and leads generated) delineated firm activities that appear particularly influential in determining certain trade fair outcomes. Prediction of high/low performance companies based on exhibit planning and management proved highly accurate. The fact that a great many significant relationships were found between activity variables and performance variables, underscores the influence and role of trade fair management.

The comparative analysis of high and low performers based on exhibit planning and management activities shows significant differences across pre-fair, on-fair and post-fair activities. Namely, high performers engaged in communications, training and preparation to a larger extent. This group was also considerably more proactive in managing visitor interaction on the stand. High performers deployed more resources and consequently their cost of exhibiting was higher than that of low performers.

A number of implications are suggested. First, integrated analysis methodology offers an improvement over the single and idiosyncratic measurement found in the literature to date. Trade fair exhibiting (preparation, management and performance aspects at and post-fair) is a process and as such involves multiple concurrent activities. The complexity of the process requires diverse measures, including temporally differentiated ones as well as objective (hard) and behavioural (soft) ones.

Second, firms' management of their trade fair participation benefits from a clearer understanding of the relationship between preparatory steps (including a carefully conceived contact and

communications plan), systematic and formal staff training (which determines greater staff effectiveness on the stand), and well-managed exhibit events, systematic and comprehensive information tracking about visitors, as well as skilful visitor handling on the booth. Decisive and timely use of information generated on the stand is a lever to generating sales. Finally, learning did not feature as a major contributing variable, however, it surely influences all three phases of trade fair planning and management, and thus shapes and modifies firms' staff training.

This integrated analysis model is a first attempt to bring more system and method to understanding trade fair exhibiting; as such, it needs to be refined and replicated on other data sets. This study aggregates data across four industry sectors. This has the virtue of providing more generalizable results. At the same time, however, the trade fair objectives sought by firms, as well as the methods employed to achieve these, may well vary across sectors. This suggests that sector-specific (vertical) fairs be examined in future studies because trade fair process management variables may have a different influence on outcomes. The concept of the integrated analysis model, however, is expected to show robustness in accommodating such diversity.

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Appendix

| Variable type/name | | Definition of Variables |
|----------------------------------|-----------------------------|---|
| ACTIVITY VARIABLES: | | Derivation |
| Pre-fair: | | |
| ACT1 | Communications index | Mean proportion of three general communications used: telephone, fax or mail, trade publication advertising, and press release |
| ACT2 | Staff training index | Mean proportion of four variables used: special selection criteria for exhibit staff, systematic staff training, trained to arouse interest, and staff has prior trade fair experience |
| ACT3 | Visitor attraction index | Sum of number of eight attraction methods used: invitation letters, product brochures with invitation, pre-trade fair telephone or faxcontact, publicity materials, free entry vouchers, contact by local dealer/agent, give-away items, and ads in trade publications |
| ACT4 | Exhibit services index | Sum of number of eight services used: distribution of press releases, stand location plans with exhibitor logo/name, visitor brochures/posters, promotion stickers, free entry vouchers, trade fair calendars, business magazines with trade fair feature, and exhibitor name/products in press materials |
| On-fair: | | |
| ACT5 | Exhibit events index | Sum of number of four special events used: videos, seminars, receptions, and contests |
| ACT6 | Visitor contact procedure | Use of specific visitor contact procedures. |
| ACT7 | Visitor tracking index | Mean proportion of five variables recorded: visitor name, company name, awareness level, purchase readiness, and use of prospect qualifying procedure |
| ACT8 | Visitor interest index | Mean proportion of four interest types collected: product enquiry, product application, technical process, and general company information. |
| ACT9 | Buying information index | Sum of number of five information types collected: timing of purchase decision, size of purchase, visitor's role in process, other decision makers involved, and length of purchase process |
| Post-fair: | | |
| ACT10 | Prompt follow-up | Follow-up within a week of the trade fair |
| ACT11 | Delayed follow-up | Follow-up delayed: three months after trade fair or longer. |
| ACT12 | Participation cost | Total cost to participate in trade fair: space rental, design/construction of exhibit, shipping costs, staff salaries and expenses, and promotion costs |
| PERFORMANCE VARIABLES: | | |
| Immediate - quantitative: | | |
| PER01 | # of contacts | # of contacts made from exhibit |
| PER02 | # of qualified leads | # of qualified leads made from exhibit |
| PER1 | On-site sales | % of total sales made on-site at the trade fair |
| PER2 | # of contacts per staff | # of contacts divided by # of staff |
| PER3 | # of leads per staff | # of qualified leads divided by # of staff |
| Immediate - qualitative: | | |
| PER4 | Key decision-makers reached | % of visitors who were sole/main purchase deciders |

| Delayed - quantitative: | | |
|--------------------------------|-------------------------------------|--|
| PER5 | Leads converted within 12 months | % of qualified leads converted to sales within 12 month of the trade fair |
| PER6 | Time to secure sale | Average number of months taken to secure sales from exhibit visitors. |
| PER7 | Total sales from ITF | Dollar value of total sales resulting from the trade fair exhibit |
| PER8 | % of sales secured within 12 months | % of total sales made within 12 months of the trade fair |
| PER9 | Cost per lead | Total exhibit cost divided by # of qualified leads |
| Delayed – qualitative: | | |
| PER10 | % of objectives achieved | Average proportion of 16 exhibit objectives reported as achieved: testing market for demand, acceptance and competitiveness, identifying or appointing agents/representatives/distributors, obtaining quote or bid opportunities, making immediate sales to final users, making immediate sales to dealers/distributors, securing licensing/joint venture arrangements, making business contacts, maintaining presence in market, meeting regular customers, agents/representatives/distributors, introducing a new product to the market, obtain new market information and intelligence, recognize trends (product development, technology, product pricing), meet competition, maintain/increase company/product exposure and prominence, establish market presence, and provide dealer/agent support |
| PER11 | Marketing learning | Average of scale for nine items that reflect contribution participation made to learning, marketing and skill improvement: knowledge of foreign market target, understanding customer requirements, identifying foreign market opportunities, assessing market risk and uncertainty, clarifying our marketing strategy, identifying target customer segments, gaining or improving export marketing skills, understanding foreign cultures, and understanding foreign business practices |