

EVALUATING PERFORMANCE OF TRADE SHOW ACTIVITIES AS A MARKETING TOOL IN THE B2B MARKET

Larisa Kapustina – Natalya Izakova – Andrei Drevaev – Ekaterina Gurova

Abstract

The article concerns marketing management of international trade show activities of an industrial enterprise in the B2B market. The study aims to develop a methodological approach to trade show activities performance evaluation and to test hypotheses about the influence of marketing activities on the performance indicators.

The authors' methodology is based on the correlation, discriminant analysis, and T-criterion as well as measuring the return on objective. The hypotheses about the influence of marketing activities on the results of international trade shows were tested for a medical equipment producer with the use mathematical statistics. The research was based on the company's results at nine major international exhibitions from 2014 to 2019: Medica (Germany), Arab Health (UAE), JNPI Congress (Germany).

The study identifies the indicators that have major influence on the contracts and agreements signed at a trade show. The authors propose a control system to measure the relation between the number of contracts and the marketing activities performance indicators alongside with the quality of the trade show events.

Discriminant analysis allowed the authors to identify the trade shows that are effective for the company. Based on the trade show performance evaluation the authors have developed recommendations to improve the marketing management.

Key words: trade show performance indicators, industrial enterprise, marketing management, return on objective, discriminant analysis

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1 Introduction and literature review

Participation in trade shows and industrial exhibitions plays a crucial role in a company's success – especially that of exporting companies in technology-intensive industrial sectors. Trade shows provide opportunities to exchange experience, collect information on major

industry trends, promote products and brands. Industry exhibitions are important for the participants (business, entrepreneurs, sales representatives) as a marketing tool in the B2B market. Evaluation of the trade show activities performance is an essential part in the planning system of a company's marketing activities, budgeting, promotion strategies development. It allows adjusting the export strategy for companies targeting foreign markets. The study aims to develop a methodological approach to trade show activities performance evaluation and to test the hypotheses about the impact of marketing activities on the results of participation in an international trade show for a mechanical engineering enterprise.

Most approaches to measuring the trade show activities performance include the following stages: determining the goals for the event; monitoring and collecting feedback during the event; calculating the ROI (return on investment) and ROO (return on objective) indicators (Karasyov, 2010, Berezina, 2015, Bolotova, 2014).

ROI is the most widespread and significant indicator for performance evaluation of various marketing events. It allows companies to evaluate the cost efficiency of an event, calculate the return on the spending on the participation and the profit resulting from trade shows (Sims, 2015). Situma (2012) focuses on the growing influence of the producer-customer relationship system and the need to set use appropriate marketing tools that establish and maintain relationships with customers. Situma (2012) proposes the model of event performance which includes groups of dependent and independent variables determined by the survey among the trade show participants.

Brown (2013), Collins (2013), and Kenyon (2019) identify the following results of participation in a trade show to be considered the main ones: expansion of the sales geography, signing contracts, direct sales, drawing media attention, maintaining reputation of a stable and reliable company, studying the market, searching for employees.

Mendonça da Silva, Santos, & Moutinho (2019) proposed the concept of a trade show activities performance evaluation model applied to the innovation process divided into its main stages: generation of ideas, research and development, introduction to the market, monitoring, and results. In particular, the model implies monitoring and identifying the influence of various elements of each stage performance evaluation with the use of the tools and information sources available only at trade shows and industrial exhibitions (observing competitors, monitoring the visitors' reaction to a prototype or a new product, studying the innovative product sales dynamics, etc.) The proposed model was not empirically tested in the original study.

Çobanoğlu & Turaeva (2014) pay attention to the wide range of tasks and results of trade show activities and conclude that a system of performance indicators is required as well

as keeping track of expenses and incomes resulting from an industrial exhibition. They revealed the following significant correlations: positive impact of staff training and the choice of the exhibition stand location on the sales during the trade show as well as on the overall profit resulting from the trade show events. The profits are gained from contracts signed at the trade show and after it with business contacts established during the event.

Most authors share the opinion that trade show performance evaluation criteria include not only those associated with the commercial activities and ROI, but also those aiming marketing goals (Gottlieb, Brown, & Drennan, 2011; Santos & Mendonça da Silva, 2013; Gottlieb & Bianchi, 2017). Such indicators as brand awareness and product perception are difficult to identify in the short and medium term. Return on objective indicator (ROO) allows evaluating the performance with regard to goals not directly tied to sales. ROO evaluation often involves experts and is an example of a qualitative study (Karasyov, 2010).

Tafesse and Skallerud (2015, 2017) conducted a study with the most comprehensive and consistent theoretical literature review on the topic of exhibition activities regarded as a marketing tool. They have identified the lack of studies aimed to develop methodological models for trade show performance evaluation. The main tools include surveys and the following data encoding and statistical analysis of interrelations. Since the company can set various goals for its trade show activities aiming at direct economic or marketing results, it can be concluded that trade show performance evaluation requires a comprehensive system comprised of both qualitative and quantitative indicators.

Developing the strategy of international trade show participation may require the use of the tools aimed at analyzing heterogeneous indicators and identifying relations between indicators which are difficult to quantify but can be of crucial importance for the company's performance at a trade show. Elimination of the methodological limitations in evaluating the company's trade show activities will allow companies to have well-justified basis for managerial decisions, which, in turn, will simplify and arrange systematically the marketing management of a company's trade show activities.

2 Methodology of the study

The authors propose a comprehensive approach to evaluation of the marketing management performance for trade show activities of an industrial enterprise. The approach is based on the methods of correlation, discriminant analysis, T-criterion and return on objective (ROO).

Two groups of performance indicators can be identified: those for international trade show participation and for marketing activities before and during a trade show (Table 1).

Tab. 1: Trade show and marketing activities performance indicators

Performance indicators for marketing activities	Performance indicators for trade show participation
Quality of preparatory pre-exhibition activities Attracting visitors to the stand	Number of contacts resulting from the trade show
Quality of events at the trade show Quality of promotional materials, videos, product presentations	Number of potential partners
Quality of registrations and data collected from the contacts	Quality of marketing information received during the trade show about markets, competitors, products
Requests for commercial information Number of requests confirming interest in purchase	Share of agreements signed as a result of the trade show
Resuming the contact after the trade show: - within a week after the exhibition, - delay in resuming the contact - within 1-3 months after the exhibition	General evaluation of the results of participation in the trade show: low or high performance

Source: Authors' own elaboration

The methods of mathematical statistics are used to test the hypothesis about the influence of marketing activities on the performance of an industrial enterprise's participation in international trade shows. Correlation analysis is used to identify the relationships between the groups of indicators. Performance evaluation includes both qualitative and quantitative indicators. In order to include qualitative indicators in the analysis, information encoding system was used which implies assigning quantitative values to various levels of achieving the targets. For the sake of interpretation of the results of the analysis, the qualitative performance indicators can be assessed as "low performance" and "high performance", where the former means not achieving and the latter means achieving the planned goals. Low performance is evaluated with 1 point and high performance with 2 points.

The next stage is represented by discriminant analysis for the two groups of indicators, which allows predicting if the objects of study belong to one of the two nonoverlapping groups: low or high performance. Discriminant analysis has the advantage in this case of putting each of selected indicators into only one group of trade show results. Apart from that, it shows which indicators contributed to the increase of the trade show participation performance.

The T-criterion analysis is performed for independent samples in order to determine the events with the largest share of cooperation agreements signed as a result of the trade show. The method allows checking if the average values of a particular indicator in the two groups are equal. The threshold value is set for the share of cooperation agreements of 60% and more.

The results of the analysis can be used to identify the relationship between marketing activities and the international trade show participation performance.

3 Results

The methodology was tested for the Production Association the Ural Optical and Mechanical Plant (UOMZ, JSC) – Russian industrial manufacturer of medical equipment. The company manufactures optoelectronics, energy-saving LED solutions, surveying geodesic instruments, medical equipment. The products are exported to 80 countries of the World. The neonatal equipment accounts for the biggest share in the company's exports. The company started cooperation with Special Laboratory Equipment Ltd (SLE Ltd) of Great Britain in 2001. At first, the role of UOMZ was limited only to local assembling of imported parts of simple medical equipment. However, the partnership has grown into a Russian-British joint production of high-tech artificial respiration units. The production process complies with ISO 9001; and CE (European Conformity) certificate proves compliance with the harmonized standards (HS) and directives of the European Union. The phototherapeutic LED lamp (medical irradiator) for the newborns has the set of medical and technical parameters corresponding to the Western European and American competing products.

The company promotes its products mainly by participation in industry exhibitions and trade shows, congresses, conferences focusing on neonatal, intensive care and respiratory equipment. In order to increase sales in the European Union, a subsidiary was established in Switzerland (Triallptek GmbH) which was certified as a Private Label Manufacturer. It allows UOMZ to use the Swiss brand at exhibitions.

The study was based on the internal documentation of UOMZ on the results of its participation in nine major international exhibitions: Medica (Germany), Arab Health (UAE), JNPI Congress (Germany) during the period of 2014-2019. Statistically significant correlations were identified between several pairs of indicators (Table 2).

The quality of preparatory pre-exhibition activities indicator takes into account in particular invitations to visit the company's trade show stand. It has direct correlation with the share of agreements signed after the exhibition ($r = 0.72$). Well-organized trade show stand activities include the presenting exhibits, meeting visitors, negotiating, as well as the quality of promotional materials, videos, and product presentations. The indicator has direct correlation with the increase in the overall assessment of the trade show performance and the number of agreements signed: correlation coefficients respectively equal to 0.77 and 0.92. The p-level

value is less than 0.05, which shows the significance of the correlation and proves that the dependence is reliable for the 4-year sample.

Tab. 2: Correlation of international trade show participation performance indicators and indicators of the marketing activities performance for UOMZ, 2014-2019

Performance indicators for marketing activities	Performance indicators for trade show participation	Correlation coefficient (r-Pearson)
Quality of registrations and data collected from the contacts	Share of agreements signed as a result of the trade show	0.69 direct
Quality of pre-exhibition activities	Share of agreements signed as a result of the trade show	0.72 direct
Quality of the trade show events	General assessment of the trade show performance	0.77 direct
Quality of the trade show events	Share of agreements signed as a result of the trade show	0.92 direct
Requests for commercial information	Share of agreements signed as a result of the trade show	0.69 direct

Source: Authors' own elaboration

The discriminant analysis allowed distributing the performance indicators into two groups: high performance and low performance (Table 3). The value of statistical significance (p) is 0.012, less than 0.05, which proves the representativeness of the discriminant analysis.

Tab. 3: Results of the discriminant analysis

General assessment of the trade show performance		Average	Interpretation of the average indicator
Low performance	Share of agreements signed as a result of the trade show	1.40	Less than 20% of contacts signed an agreement
	Number of contacts established at the trade show	125.00	Number of contacts, not encoded
	Quality of invitations to the trade show	2.20	Less than 51% of the invited contacts visited the stand
	Number of potential partners	1.60	Less than 50% of visitors are potential partners
	Requests for commercial information	2.00	Less than 50% of contacts requested commercial information
High performance	Share of agreements signed as a result of the trade show	2.75	More than 51% of contacts signed an agreement
	Number of contacts established at the trade show	200.50	Number of contacts, not encoded
	Quality of invitations to the trade show	3.25	More than 51% of the invited contacts visited the stand
	Number of potential partners	3.50	More than 71% of visitors are potential partners
	Requests for commercial information	2.50	More than 50% of contacts requested commercial information

Source: Authors' own elaboration

The high-efficiency groups include values that signify the high quality of pre-exhibition activities (more than 51% of the invited contacts have visited the stand), on-set activities (collecting visitors' data, negotiating, presenting the products). All the variables influence the performance indicators: obtaining contacts interested in cooperation, the number of contacts and cooperation agreements signed as a result of the trade show. The analysis showed that during the 4-year period 5 trade shows out of 9 were identified as high-performance and 4 were low-performance trade shows.

The T-criterion method was used to determine the values that describe the trade show marketing activities leading to the largest share of cooperation agreements signed as a result of the trade show (Table 4). The threshold value was chosen for the second indicator, which corresponds to the share of cooperation agreements signed equal to 60% and more than that. It was found out that, in order to achieve high performance according to this criterion, it is required to achieve more than 70% of visitors from the number of invited contacts as a measure of the pre-exhibition activities quality, achieve high performance on trade show activities, and collect complete visitors' data for future negotiations after the trade show.

Tab. 4: Analysis results analysis by t method - criterion

Share of agreements signed out of overall number of contacts		Number of trade shows	Average	Interpretation of the average
Quality of invitations to the trade show	≥ 2	6	3,17	More than 51% of the invited contacts visited the stand
	< 2	3	1,67	Less than 20% of contacts signed an agreement
Quality of the trade-show events	≥ 2	6	2,50	High-quality events
	< 2	3	1,33	Low-quality events
Quality of the visitors' registration	≥ 2	6	2,67	Complete information about the contact
	< 2	3	1,33	Lack of information about the contact
Overall trade show performance assessment	≥ 2	6	1,67	High performance
	< 2	3	1,00	Low performance

Source: Authors' own elaboration

The results of the study proved the following hypotheses and conclusions:

- higher quality of the visitors' data collection leads to higher probability of signing an agreement as a result of the trade show;

- the quality of the visitors' data collection and the quality of negotiations influence the visitors' interest in the products of the stand, which leads to an increase in requests for commercial information;

- the quality of the trade show stand activities, the meetings and the presentations contributes to an increase in the share of agreements signed as the result of the trade show;

- requests for commercial information signify higher probability of concluding an agreement as the result of the trade show;
- higher quality of the trade show stand activities leads to higher overall assessment of the trade show performance.

4 Discussion

Trade shows are the main promotion tool for a company in the B2B sector entering a foreign market. The scientific community shows mostly unsystematic interest in the topic and, as a result, the problem of trade show activities performance evaluation has not been studied in all its complexity. With only limited empirical data available, which mainly reflected the goals of a particular company, the researchers have found it difficult to draw general conclusions. A universal solution to trade show activities performance evaluation thus cannot be found in the scientific literature. In this regard, the methodological approach proposed by the authors of the article fills a significant gap in the state of knowledge on this topic.

The enterprise chosen to provide the information base for the study has significant experience in exporting of medical equipment and managing international trade show activities. It has proven its competitiveness in the EU. Therefore, conclusions about the factors of the trade show activities performance can be disseminated and used by other companies that take part in industrial exhibitions. At the same time there is one limitation. As shown by in a previous study conducted by the authors (Kapustina & Kondratenko, 2018), the brand of the company and the country of origin effect have significant influence on the performance of the trade show activities. Therefore, companies with different brand strength will need adjustments of the goals and assessment gradings proposed by the authors in the methodological approach.

The authors have developed a quality management system for the implementation of the target indicators that influence the overall trade show participation performance. The system is universal and can be used by any participant of a trade show (Figure 1). The proposed quality management system allows evaluating achievement of all the target indicators aimed to improve the performance of the trade show activities. Alongside with that, the systems can be used to monitor the processing of the qualitative data received as the result of the trade shows. A correlating key performance indicator was chosen to evaluate the effectiveness of the proposed system of target indicators – the share of agreements signed as the result of a trade show in the total number of trade show contacts.

Fig. 1: Quality management system for targets indicators affecting the overall trade show participation performance

	Low achievements	Medium achievements	High achievements
Quality of invitation to the trade show	Less than 50% of the invited contacts visited the stand	51-75% of the invited contacts visited the stand	76-100% of the invited contacts visited the stand
Quality of trade show activities	Less than 20% of the feedback received is positive	21-60% of the feedback received is positive	61-100% of the feedback received is positive
Quality of the collected visitors' data	No visitor's data	Limited data: only contact information	Complete visitor's profile to arrange negotiation

Source: Authors' own elaboration

The comprehensive marketing activities assessment should be accompanied by marketing information system that both responsible staff and managers will use to register, monitor and use in order to implement the innovations proposed.

The main limitation for implementation of the proposed methodology is associated with specific features of marketing management for particular industries: some companies will pursue other specific goals during trade shows and will not monitor the proposed indicators.

Conclusion

The development of a methodology for a comprehensive trade show activates evaluation for an industrial enterprise aims to identify the events and activities that have the maximum influence on the overall company's trade show participation performance. As a result, marketing solutions can be developed to improve the trade show activities marketing management performance. The proposed methodology allows evaluating performance and monitoring effectiveness of trade show activities over a period of several years.

The research showed that the following factors have the major influence on the indicator of cooperation agreements signed as the result of the trade show: the quality of the stand visitors' data collection; the quality of negotiation; the quality of the stand activities, meetings and presentations of product. The proposed quality management system allows evaluating the implementation of each target indicator aiming to improve trade show activities performance. At least two factors prove the importance of evaluating a company's trade show activities performance. Firstly, it allows the company to focus on marketing activities that improve trade

show performance and help in shaping the export strategy. Secondly, it justifies the funding of trade show participation and budget allocation.

References

- Berezina, E. A. (2015). Effective participation of industrial enterprises in exhibitions. *Nauka-rastudent*, 15(03), 1-7.
- Bolotova, I. S. (2014). Exhibition activity as an independent branch of economy. *Belgorodskiy ekonomicheskij vestnik*, 4, 138-143.
- Brown, C. (2013). *Best in Trade Show: How to Exhibit at a Trade Show*. Hudson, Ohio: Marketing Resources & Results, Inc.
- Çobanoğlu, E., & Turaeva, V. (2014). Effects of the pre-show, at-show and post-show firm activities on trade show performance measurement. *Procedia-Social and Behavioral Sciences*, 150, 762-771.
- Collins, S. (2013). *How to Get the Most from Exhibiting at Conferences: Advice and tips on optimizing your return on investment when getting an exhibit hall booth at an industry trade show, convention, or conference*. Scotts Valley, CA: CreateSpace Independent Publishing Platform.
- Gottlieb, U. R., Brown, M. R., & Drennan, J. (2011). The influence of service quality and trade show effectiveness on post-show purchase intention. *European Journal of Marketing*, 45(11/12), 1642-1659.
- Gottlieb, U., & Bianchi, C. (2017). Virtual trade shows: Exhibitors' perspectives on virtual marketing capability requirements. *Electronic Commerce Research and Applications*, 21, 17-26.
- Kapustina, L., & Kondratenko, Y. (2018). Competitiveness of high-tech machinery export and country of origin effect. *Science. Business. Society.*, 3(2), 62-65.
- Karasyov, N. V. (2010). *Sales and marketing in the exhibition business. How to attract and retain exhibitors and visitors*. Moscow: Status Presence.
- Kenyon, B. (2019). *Trade Show Guide to Success*. Scotts Valley, CA: Amazon Services
- Mendonça da Silva, P. M., Santos, J. F., & Moutinho, V. F. (2019). The role of trade fairs on product innovation: a review and some propositions. *26th APDR Congress Conference Paper*, 864-869.
- Santos, J. F. & Mendonça da Silva, P. M. (2013). Portuguese firm's motivations and decision factors to participate in international trade fairs. *6th Annual EuroMed Conference of the EuroMed-Academy-of-Business*, 941-962.
- Sims, A. R. (2015) *Improve Your Trade Show ROI: Practical strategies and tactics you can use to make the biggest impact at trade shows and other industry-related events*. Scotts Valley, CA: Amazon Services
- Situma, S. (2012). The effectiveness of trade shows and exhibitions as organizational marketing tool (analysis of selected companies in Mombasa). *International journal of business and social science*, 3(22), 219-230.
- Tafesse, W., & Skallerud, K. (2015). Towards an exchange view of trade fairs. *Journal of Business & Industrial Marketing*, 7(30), 795-804.
- Tafesse, W., & Skallerud, K. (2017). A systematic review of the trade show marketing literature: 1980–2014. *Industrial Marketing Management*, 63, 18-30.

Contact

Larisa Kapustina

Ural State University of Economics, Marketing and International Management Department,
Professor, Doctor of Economic Sciences, Head of the Department

62, 8 Marta Street, Ekaterinburg, Russia, 620144

Email: lakapustina@bk.ru

Natalya Izakova

Ural State University of Economics, Marketing and International Management Department,
Associate Professor, Candidate of Economic Sciences

62, 8 Marta Street, Ekaterinburg, Russia, 620144

Email: izakovan@gmail.com

Andrei Drevaev

Ural State University of Economics, Marketing and International Management Department

62, 8 Marta Street, Ekaterinburg, Russia, 620144

Email: adrevaev@gmail.com

Ekaterina Gurova

Ural State University of Economics, Marketing and International Management Department

62, 8 Marta Street, Ekaterinburg, Russia, 620144

Email: ea.gurova@yahoo.com