Methods of assessing the efficiency of the foundry industrial marketing

N V Fedorova^{1,2}, N N Dzhioeva², V V Kukartsev^{1,2}, N A Dalisova^{2,3}, A R Ogol¹ and V S Tynchenko^{1,2}

¹Reshetnev Siberian State University of Science and Technology, 31, Krasnoyarsky Rabochy Av., Krasnoyarsk, 660037, Russian Federation

²Siberian Federal University, 79, Svobodny pr., Krasnoyarsk, 660041, Russian Federation

³Krasnoyarsk State Agrarian University, 90, Mira Avenue, 660049, Krasnoyarsk, Russia

E-mail: vadimond@mail.ru

Abstract. It is investigated subtleties of the "efficiency" term for clear reflecting the meaning of considering methods for assessing the foundry marketing at the present stage. There is creating classification of modern methods of assessing the efficiency of the marketing as well as recognizing directions and indicators of assessing a level of foundry marketing efficiency. It is stepwise investigated different approaches of assessing the marketing efficiency included different nuances or limitations. There is considering both estimation qualitative methods and quantitative methods for including the whole fullness of modern approaches. Also it is supposed to use the marketing informational system as the one of possible ways for assessing the marketing efficiency. Further, it is studied a way at which it uses questionnaire where the inclusion of information is revealed in details. Tactical and strategical aspects of foundry are compared. It is investigated the meaning of the marketing and its subtleties. It is studied the qualitative assessment of the marketing and the marketing competence.

1. Introduction

Increasing an amount of requirements for managing the marketing motivates industrial enterprises for reviewing methods of assessing efficiency. Understanding what the marketing is consisting of, what processes do influence efficiency in an enterprise and become the base of an accurate, coordinated movement towards goals. Today methods of assessing efficiency of marketing are presented, in all diversity. The practice is shown that it is less than perfect and has several significant drawbacks.

In the managing the marketing area theoretical and methodical scientific developments are improved in works of such domestic and foreign scientists as T. Ambler, P. Doyle, M.V. Vysochina, V. Pohabov, I. Ponomarenko, L.I. Kochurova, E.P. Golubkov and others.

Insufficient development of a problem, insignificant amount of interdisciplinary economic works of the theme are determined to choose a theme of the research, contributed its goal and tasks.

A studying object is foundry implemented the marketing of it. A subject is a process of the managing the foundry marketing. A goal of the study is developing the assessment of the foundry marketing based on a balanced scorecard. To achieve the goal of the studying it is determined and solves the next tasks:

Content from this work may be used under the terms of the Creative Commons Attribution 3.0 licence. Any further distribution of this work must maintain attribution to the author(s) and the title of the work, journal citation and DOI.

Published under licence by IOP Publishing Ltd

1

- Investigating theoretical problems of the forming a system of assessing the foundry marketing
 including the influence of knowledge and information, ways of development, approaches of
 assessing its efficiency in present conditions.
- Investigating modern methods of assessing the foundry marketing efficiency.

2. The efficiency assessment

The "efficiency" term might be considering in two ways:

- The efficacy or return, efficiency as a final characteristic of any activity at all, the execution of certain functions. The characteristic includes an effect related to cost for its reduction. The solution is more effective, higher level of achieving goals and less cost for implementing.
- The efficacy as a potency characteristic, effectiveness of some activity without compared results with wasted resources. In the case, it describes choosing correct goals, directions of actions, without which the high efficacy of achieving incorrect goals might be ensured from the first way. The potency of actions is a level of corresponding its result of achievement tasks of the goal or a set of goals (supposed result) [1].

Assessing efficiency of the marketing is a difficult task. In the present in the scientific literature devoted problems of the managing the marketing, works of domestic and foreign scientists are devoted to problems of assessing the foundry marketing efficiency. There is not always providing opportunity of expressing a value and qualitative effect obtained through marketing activities. There are many different approaches for solving the problem that allow highlighting the next classification of modern methods of assessing the marketing efficiency. Also, it is necessary to find out ways and indicators of assessing the foundry marketing efficiency.

The assessment of the marketing efficiency is the determining the compliance of the result of marketing goals.

There are the next ways of assessing the foundry marketing efficiency:

- From the position of increasing business value.
- From the position of a multi-level system of managing the marketing.
- The status of the marketing informational system.
- Based on the calculating the rating of the marketing efficiency.
- Based on assessing the foundry marketing [2].

T. Ambler and P. Doyle consider the quantitative assessing the marketing from the position of business value, that is, the marketing of foundry will be more effective, higher market value of an enterprise [3]. Quantitative methods of assessing the marketing efficiency require comparing costs of the marketing with obtained gross profit and advertising costs to sales. Analysing profitability and cost might be the one of variants of quantitative methods of assessing the marketing efficiency. During the assessment of the marketing it is needed to present parameters of concrete business unit, there are realization volumes, an organization share in the market, marginal and net profit.

At the same time, realization volume (gross turnover) is a complex indicator and it reflects not only the success of efforts for distribution but the correctness of the price and also how much the product is related to the target consumer group. The dynamics of sales volume is an indicator of the organization position in the market, its share and trends. Also it should be noted that an independent point in the analysing a structure of costs and assessing potential of developing an organization is borrowed analyse of break-even point: break-point volume shows how much products should be sold to the marginal profit to pay all fixed costs. The volume is an indicator of possibilities of organization manoeuvre in the market [4].

3. The concept of Dovle

According the Doyle concept, the marketing is transformed from a specific way of activity to inalienable part of the management.



In the past marketing specialists let led by managers, who are used to obvious accounting and try to justify their strategies through increasing current income. The way inevitably becomes destructive because the marketing is related to the creation and the management of assets. Investing in brands and relations with consumers as costs for studying and developing it rarely pay off in the same time when it was made. Its main task is creating and protecting cash flows. Analysing shareholder value is the most important tool allowed determining and showing economic result of the marketing.

"Without effective marketing shareholder value is converted to a trivial concept. Analysing shareholder value allows the company management to estimate alternative strategies but just the marketing and investments allow determining short ways to achieve goals" P. Doyle summarized [5].

However, the effective using the way of assessing the foundry marketing efficiency by Russian foundries restricts two points:

- Main provisions of the theory are formulated for conditions of developed stock market in which the measure of business value is a market price of equity.
- The theory does not suggest concrete technologies for qualitative assessment of efficiency of marketing programs which might be used for practical analyse.

The way to assess the foundry marketing efficiency in the position of a multi-level system of managing marketing has been developed by V. Pokhabov and I. Ponomarenko and M.V. Vysochina [6, 7].

4. The Pokhabov and Ponomarenko methodology

V. Pokhabov and I. Ponomarenko estimate the efficiency of managing the marketing at three steps of the managing the marketing: the managing an activity, the managing a function, the managing demand. Author has developed the methodology of assessing the efficiency of a system of managing the foundry marketing which is defined [8]:

- The efficiency of the managing an activity based on the assessing: the market orientation of senior management; the market orientation of staff; interrelation between senior management and staff; a degree of openness of managing environment system.
- The efficiency of managing a function, presented dependence of indicators of the efficiency of such as variables: the planning, the organizing, the motivating, the controlling.
- The efficiency of managing demand based on assessing indicators of the efficiency of main functions of the foundry marketing: the product management, the sale management, the price management, the communication management.

Vysochina M.V. [9] suggest to consider the efficiency of the marketing as combination of four components: the efficiency of the strategic managing the marketing, the efficiency of organizing and functioning the marketing, the efficiency of realising tactical programs of the marketing, the efficiency of functionality of the marketing informational system. Every component should be estimated with groups of certain indicators (Table 1).

Suggested scorecard can allow assessing the efficiency of the foundry marketing at all and stepwise. Suggested approaches for assessing the marketing efficiency have several advantages: the structuring which allow clear determining and formulating problems of managing the marketing; availability of understanding result by staff; the focus just on investigating the marketing part of the process of the managing an enterprise.

Table 1. Scorecard of assessing the foundry marketing.

The direction of assessing the foundry Assessment indicators marketing efficiency



The efficiency of strategical managing The clearness of goals; profit (in dynamics); profitability of the marketing investments; the market share; a level of enterprise

competitiveness; image and reputation; client partisanship to products of an enterprise; the orientation to market needs; the technological level; the volume of investments in new products/services; the break-even period; capacity of a production process

The efficiency of organizing the marketing in an enterprise

The degree of interaction between the marketing and other departments of an enterprise; the flexibility of the organizational structure of the marketing; time of processing an order; the satisfaction of staff; the income per an employee; the coefficient of strategical retraining; the coefficient of strategical informing; the amount of suggestions for improvement per an employee; the coefficient of professional prospects.

The efficiency of realising tactical marketing programs

Sales volume; profit; inventory turnovers; profitability of product, a level of competitiveness of a product/service; profitability of segment; the amount of new clients; the amount of complaints; share of refunds and discounts; timely delivery; comparability between a price and quality of a product/service; frequency of reviewing prices; a level of service

marketing informational system

The efficiency of functionality of the The level of equipment of technical resources; costs for functionality of MIS; frequency of conducting marketing studies; availability of database for others; availability and use of methods of executing and analysing information; convenience of using processed information

5. Using marketing in formational system

The third way for assessing the marketing efficiency is based on the determination of a state of the marketing informational system.

The efficiency of the foundry marketing has to be estimated in quality and timeliness of the MIS. However, in the case it is not taken into account that a user will not always use the information but if he will, it is guaranteed to make a right decision on the base of it [10].

In Kochurova L.I. [11] opinion the using MIS is an initial moment in the economic part. For assessing the economic aspect of the foundry marketing in the MIS it is suggested to calculate a coefficient of the marketing which will integrate effectiveness of the enterprise functionality in the market and become a tool for increasing the work efficiency. The author has determined the turnover volume, the average of inventory, production costs as economic criteria from the complex of which it is able to estimate the efficiency of the foundry marketing as a coefficient of the marketing. To achieve more accurate assessment it may apply two more indicators: the breadth of product assortment and a coefficient of sufficient demand or an inverse coefficient of settling products in stocks. As a result, a coefficient of the marketing (Kmd) is supposed to conduct by the next formula:

$$\text{Kmd} = \sum_{i=1}^{n} \frac{1}{n} * \left[\frac{Vt'}{Vt} + \frac{A'}{A} + \frac{Kc'}{Kc} \right] + \sum_{i=1}^{n} \frac{1}{n} * \left[\frac{\bar{Z}}{Z'} + \frac{I}{I'} \right], \tag{1}$$

where: VT, VT' - are volumes of production (inventory turnover) in previous and reporting periods; A, A' - are breadths of the product assortment in previous and reporting periods; Kc, Kc' - are coefficients of demand in previous and reporting periods; \bar{Z}, \bar{Z}' - are averages of product in stocks in previous and



reporting periods; I, I' - are costs of an enterprise in previous and reporting periods; n - is the number of indicators in the calculation.

The coefficient of demand is calculated by the formula:

$$Kc = \frac{\sum BV}{Z_k},\tag{2}$$

$$In\bar{B} < \frac{\bar{Z}*T}{Vt},\tag{3}$$

where: $\sum BV$ is sum of products in stock with turnover which is faster than \bar{B} ; $In\bar{B}$ is inventory turnover; T is reporting period; \bar{Z} is average of products in stocks in an enterprise; Vt is the volume of production (inventory turnover) in the reporting period; $Z\kappa$ is products in stocks at the end of year.

In foundry where there is not automatized metering a movement of commodity mass, *Kmd* can be calculated by three parameters.

$$Kmd = \left[\frac{Vt'}{Vt} + \frac{\bar{Z}}{\bar{Z}I} + \frac{I}{I'}\right]. \tag{4}$$

6. The Golubkov approach

A approach based on calculating the rating the efficiency of the marketing suggested by E.P. Golubkov [7] reflects a level of achievement of five attributes of the marketing efficiency in an enterprise: the orientation to consumers; the marketing integration; the adequateness of the marketing information; the strategical orientation; the efficiency of the managing the current activity of the marketing. The way is supposed to estimate common marketing efficiency. However, in the parallel way it is advisable to conduct the assessment of the efficiency of certain components of the marketing.

Main functions of the management are the planning and the organizing. It is possible to estimate conducting these functions of the marketing and the managing the marketing just with the expert assessment. As experts, there will be specialists of the foundry marketing [12].

To assess the efficiency, it is developed questionnaire in which there are 15 questions such as: marketing researches, the market segmentation and the product positioning, analyzing the organizing the marketing, the planning the marketing, the developing a complex of the marketing.

The maximal amount of points in every question is 2. The maximal assessment of the marketing efficiency is 30 points. To estimate a level of the efficiency it is developed a scale of assessment based on the principle of the progressive step. The step size is 4 points and for "the best one" and "an effective one" values it is 5 points. In the way, to determine a level of the marketing efficiency it might be estimate both strategical and tactical aspects of the enterprise activity (Table 2).

In conditions of changing macro and micro environment foundry are forced to critically estimate its opportunities and take into account constantly arising threats and risks. The assessment of the marketing is supposed to calculate indicators of the marketing of foundry [10, 13].

7. The activity of the marketing

The activity of the marketing is a characteristic of enterprise actions in competitive environment. The marketing activity might be considered as the one of components of the business activity.

The assessing the marketing activity of foundry has a quantitative way. The activity is the main indicator of the efficiency of foundry marketing actions.

For qualitative assessment of the marketing for which result might be signaled about possible changes of economic indicators, it may be used the whole set of methods of marketing researches. Observing changes of relation to organization from a side of clients, dealers and other members of the marker activity can allow the enterprise management to take needed measures to reduce negative reactions.



MIST: Aerospace 2019 IOP Publishing

IOP Conf. Series: Materials Science and Engineering 734 (2020) 012083 doi:10.1088/1757-899X/734/1/012083

Table 2. Points of assessing the efficiency of the marketing.

Strategical assessment	Tactical assessment
Marketing plans	Marketing plans
The effectiveness of organizing the marketing	The rationality and the effectiveness of costs for the marketing
The effectiveness of the marketing information system	The correctness of suggests related external conditions of the marketing
The level of product compliance	Profitability of different products, areas, groups of consumers, ways of distribution, the activity in different types of the market
The efficiency of developing and introducing new products to the market	The efficiency of managing inventory
The adaptability of the system of managing the marketing to changes of external conditions	The efficiency of the marketing communication
Competitive advantages of production	The efficiency of the functionality of certain sale ways
The market orientation of enterprise management Staff capacity	The pricing efficiency The service efficiency

Slow transition to the informational economic is introduced the necessity of profound changes of organization of the foundry marketing.

In these conditions, a role of the marketing competence is increased, it is the threshold level of accumulated marketing knowledge by an individual one, team or enterprise. The marketing competence as the one of enterprise resources provides its long-term competitiveness. It is presented as a crucial factor of the enterprise success [12].

The high level of the marketing competence is implied the possibility of reducing entrepreneurial risks, actively influencing to consumer demand, forming strong relations with subjects of the marketing system.

It is important to determine a complex of composition for assessing the marketing competence. It requires colligating methods of assessing the marketing competence of every employee of an enterprise, to develop methods of quantitative and qualitative assessment of collective enterprise marketing competence.

8. Conclusion

It is studied possible problems of creating a system of assessing the foundry marketing as well as the impact of knowledge and information, directions of improving, approaches of estimating its efficiency in the modern time.

Modern methods of assessing the foundry marketing efficiency have been studied.

References

- [1] Doyle P 2001 The marketing oriented to the value (Saint-Petersburg: Piter)
- [2] Ambler T 2003 *The marketing and the financial result. New indicators and the enterprise wealth* (Moscow: Finances and statics)
- [3] Bassovskiy L E and Protasiev V B 2003 *The quality control* (Moscow: Infra)
- [4] Alekseeva M M 1997 The planning the company activity (Moscow: Finances and statics)
- [5] Pokhabov V and Ponomarenko I 2001 The methodology of assessing the efficiency of managing the marketing of an enterprise *The marketing* **5** 102-20
- [6] Chernyaeva Yu G and Vysochina M V 2007 Assessment of the effectiveness of enterprise



MIST: Aerospace 2019 IOP Publishing

IOP Conf. Series: Materials Science and Engineering 734 (2020) 012083 doi:10.1088/1757-899X/734/1/012083

- management The culture of the peoples of the Black Sea 17 119-25
- [7] Golubkov E P 2000 Marketing researches: theory, methodology and practice (Moscow: Finpress)
- [8] Kochurova L I 2004 The assessment of an economic aspect of the enterprise marketing *The economist handbook* **8** 211-9
- [9] Bagiev G L and Shulga A O 2010 Interaction marketing concept: measurement and performance evaluation *Problems of the modern economy* **2** 262-5
- [10] Moiseeva N K and Konyusheva M V 2005 The managing the marketing: theory, practice, informational technology (Moscow: Finances and statics)
- [11] Moiseeva N K, Ryumin M Y, Slushaenko M V and Byudnik A V 2003 *The branding in the marketing managing* (Moscow: Omega-L)
- [12] Solovyeva Y N 2006 Theory and methodology of providing the marketing compliance in the control strategic alliance system (Saint Petersburg: SpbSGEP)
- [13] Chernozubenko P E 2019 *Marketing plan* Retrieved from: http://www.marketch.ru/marketing dictionary/marketing terms p/abc marketing plan/



Reproduced with permission of copyright owner. Further reproduction prohibited without permission.

