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The Current Methods of Measurement of Market Orientation

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Abstract

The article deals with the new trends in measurement of market orientation. Market orientation is one of the most investigated methods founded on marketing conception. Market orientation comes back in 90th of 20th century by workers Kohli and Jaworski and Narver and Slater. It is described as a method to contribute better managing of company by many researchers. These research studies involved definition of market orientation, impact market orientation on business performance, methods for measurement of market orientation and implementation the market orientation into managing of companies. After publication the two different methods for measurement of market orientation, some authors had shortcomings to these methods. Many methods have been declared in the previous years, but lot of these methods includes the knowledge by Kohli and Jaworski (MARKOR) and Narver and Slater (MKTOR).

There are described twenty-six methods used to measure market orientation. The main advantages and disadvantages of each method are written. Goal of this article is to show the all methods that are described as the methods to measure market orientation and to find the best one. Description, analysis, comparison and synthesis are the methods used to write this article.

Shortly, the results from the analysis say that all methods include only a few components of market orientation, the most often mentioned components are orientation on customers, orientation on competition and interfunctional cooperation. The other components of market orientation are usually missed out. Some methods of market orientation include the items connected with business performance, but business performance is not the item of market orientation, it is the component influenced by market orientation. It is defined by only one method fulfilling these shortcomings; the methodological requests are fulfilled at this method too. To measure market orientation is recommended to use this method. The paper is a part of grant project (GA 402/07/1493).

1. Introduction

Market orientation is one of the most investigated methods founded on marketing conception. Market orientation comes back in 90th of 20th century by workers Kohli and Jaworski and Narver and Slater. It is described as a method to contribute better managing of company by many researchers. These research studies involved definition of market orientation, impact market orientation on business performance, methods for measurement of market orientation and implementation the market orientation into managing of companies. After publication the two different methods for measurement of market orientation, some authors had shortcomings to these methods. Many methods have been declared in the previous years, but a lot of these methods include the knowledge by Kohli and Jaworski (MARKOR) and Narver and Slater (MKTOR).

Goal of this article is to show the all methods that are described as the methods for measurement of market orientation and to introduce the new method. Description,

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analysis, comparison and synthesis are the methods used to write this article. The paper is a part of grant project (GA 402/07/1493).

2. The Methods for Measurement of Market Orientation

The first version of MKTOR by Narver and Slater (1990) was included on the three behaviors' components (customers orientation, competitors orientation and interfunctional co-ordination) and two decisions components (long-lasting and profit). After using Cronbach alpha coefficient, the two decisions components were excluded. MKTOR has 15 items on the basis 7 degree Likert scale. Customer orientation includes 6 items, competition orientation contains 5 items, interfunctional co-ordination has 4 items. The most shortcomings: 1. only two stakeholder orientation (customers and competitors); 2. it is not stress the speed of gaining market information and the dissemination in the firms; 3. it is general, it does not reflect particularity of firms. Langerak (1997) declare that the indicator of validity is not satisfactory. The MKTOR does not measure customers value (Pelham, 1997). The other significant critics of the MKTOR are Webster (1994), Siguaw and Diamantopoulos (1994) and Rivera (1995).

MARKOR by Kohli and Jaworski (1993) contains 20 items on the basis 5 degree Likert scale. There are three components too, but the perception of MARKOR is different. The first component measures gaining information (6 items), the second deals with dissemination of the information (5 items) and the last centre to two activities – the planed response and the implemented response. Pelham (1993), Webster (1994), Thomas (1994), Farrell (2002) pointed to no exactly definition of market orientation by Kohli and Jaworski. Market orientation is implementation of marketing conception after words by Kohli and Jaworski. Gabel (1995) and Langerak (1997) declared that Curchill conception do not used by realization of MARKOR, the indicator of validity is not satisfactory; the MARKOR does not include items about perceptions of customers and distributors. Farrell and Oczkowski (1998) pointed to MARKOR has difficult evaluation of information dissemination and MARKOR includes only one item for market measurement and most items measured customers. The MARKOR does not measure customers' value too (Pelham, 1997).

Hooley et al. (1990) supposed the method for measurement of market orientation. The aim of this method is to know, how role play marketing in the companies and how the marketing department fill its activities. Hooleys method includes 11 items on the basis 5 degree Likert scale. The most part of items are oriented for customers, only one item is oriented for competitors. The items are in meaning the plans and assumption of marketing's heads.

Liu (1993) measure market orientation with the key of marketing activities, which are develop of new products, segmentation, companies activities co-ordination, marketing plan, marketing research. There are stated some items as plan of selling, plan of production, plan of offer and prices control for the control. This method is only oriented on interfunctional co-ordination and particularly for customers. Items about competitors are not included in this method.

Deng and Dart (1994) method contains orientation on customers, orientation on competitors, interfunctional co-ordination and performance orientation. The first version of this method has 44 items; these items were reduced on 33 items after correlation analysis. A lot of reviews noticed that performance orientation is consequence of market orientation, not one of her part. This method is very similar to MKTOR (many of items are the same). The authors came with the new version of your method in 1999, but the changes are not revolutionary. Deng and Dart (1999) used other methods (MKTOR, Hooley et al, MARKOR) to construction their method. The other version has fourth components – customers' orientation, competitors' orientation, interfunctional co-ordination and performance orientation. 49 items were selected on 35 after the first research. This method includes performance orientation too; therefore it is not used for measurement from the methodology reasons.

Gima (1995) developed method for measurement of market performance founded on information. There are 6 items from the area information collection about market, 4 items about development of market-oriented strategy and 3 items about response to market orientation on the customers. This method included only customers orientation, competitors orientation are not mentioned.

Fritz (1996) engaged in the relationship between market orientation and business prosperity. He introduced a method included important prosperity components. Market orientation is one of the components; she has three items centered on customer orientation. Components as competitors' orientation and others are not included.

Lado, Olivares and Rivera (1998) tried to develop an alternative method for measurement of market orientation. Market orientation is a degree for using information about stakeholders and for co-ordination and implementation strategic activities after them. Their method has 9 components – to gain information about end customers, distributors, competitors and environment; interfunctional co-ordination; and response to gaining information about the end customers, distributors, competitors and environment. They have named their method MOS with 36 items on the basis 10 degree Likert scale. Lado, Olivares and Rivera added items about innovations to MOS in 2000. They inspired with method by Millere and Fries (1982) and method by Atuahene-Gima (1996).

Gray et al. (1998) synthesized MKTOR, MARKOR and method by Deng Dart. It was gained 20 items after using Cronbach Alfa coefficient and factor analysis. The items are sorted in 5 components – customer orientation, competitor orientation, interfunctional co-ordination, response and profit. The first shortcoming is to a little progress in the theory, see Farrell (2002). The second shortcoming leads to added profit as a part of market orientation.

The first steps of developing a method for measurement of market orientation are in 1993. Deshpandé, Farley and Webster introduced a method DFW in 1993. Whole method is aimed at customer, not at market orientation. Deshpadné and Farley integrated MKTOR, MARKOR and their method in 1996. They constructed a method named MORTN in two years later. The sense of this method is completely different from other method. MORTN is oriented on: 1. aimed business at creating value; 2. aimed business on customers' no expressed wishes; 3. perceive business as a service to customers; and 4. manage the business in the sense "customers for life". Farrell (2002) noticed that sense of business is not only services for customers and point to difficult position to gain customers for a whole life. It is missed the mobility of segments. Besides, this method reflects only customer orientation, other components of market orientation are not reflects.

Kumar, Subramanian a Yayger's (1998) constructed method on basis MKTOR. This method contains the same components as MKTOR. Customer orientation includes 6 items as MKTOR, other components have different number of items in comparison with MKTOR. Competition orientation has 4 items and interfunctional co-ordination has 5 items. Other components of market orientation are missed.

Oczkowski and Farrell (1998) tray to united of MKTOR and MARKOR. The result was 18-items method (10 items MARKOR and 8 items MKTOR). The second version of the method was presented in 2002 and it names "New Measurement of Market Orientation". MARKOR (20 items) and MKTOR (13 items) were the base for constructing this method. Items are selected into 5 dependent components: holding the customers, success of new products, selling grow, return of investments and the business performance. The independent components are selected in 10 components: market orientation, costs, market turbulence, competitors' intensity, development of technology, power of customers, market growth, size of the market, entrance barriers, and power of suppliers. Research has known that the method "New Measurement of Market Orientation" has higher coefficient Cronbach Alfa than MKTOR or MARKOR. This method does not include some other components of market orientation.

Avlonitis and Gounaris (1999) deal with definition marketing orientation. They suppose that market orientation is the same as marketing orientation. They developed your own method analyzed interfunctional co-ordination. The main was the attitude of management to risk, level of centralization, level of formalization and intensity of competition. This method misses a lot of components of market orientation.

Cadogan et al. (1999) detected a method for measurement of market orientation named EMO. The aim of EMO is to know the behavior of market orientation at the exporting companies. MARKOR is basis of this method. EMO includes three components of behavior (to gain information, information dissemination and response) and three components of changes – difficult prediction of customers' wishes intensity of competition and advantages and disadvantages of technology. EMO contains selling in abroad, profit form the export and growth of export. These components are included after recommendation by Cavusgil and Zou (1994) and Matthyssens and Pauwels (1996). 31 items are included in EMO. There is the some notice at Gray et al. – profit is included as a component of market orientation, not as a result.

Akimova (2000) developed specific method for measurement of market orientation. Market orientation is assessed from the view of competitor advantages, response to unfriendly environment and business performance. We can find items about competitors, interfunctional co-ordination and some external components. There are not some other components from the branch environment; business performance is included as a component of market orientation.

Dawes (2000) chose for his suggestion combination of a few methods (MARKOR, MKTOR, DFW, Pelhams Method, Deng and Darts Method and Faulkners Method). Faulkner (1998) founded out customer behavior and reasons of their satisfactions in the talk with 42 managers. The final method created these components: analysis of customer (5 items), analysis of customer response (5 items), competitors' orientation (4 items), and information dissemination (3 items). He stated size, costs, sale at the branch a year, entrance barriers, customers' power, suppliers' power, technology changes, competition intensity and market turbulence. The validity is verified by regress analysis.

Harrison-Walker (2001) detected method for measurement of market orientation. This method includes three components – competition orientation, customer orientation and business performance. Competition orientation and customer orientation contain statements as gaining information, information dissemination, interpretation the information and utilization the information. Business performance is divided into financial performance, performance of firms' response to customers' wishes and innovation performance. This method is not completed too; some components are not added in the method. The second problem is to fill business performance as a part of market orientation.

Haijat (2002) develop the method named CUSTOR. The reason of this method is to measure of customer orientation. 17 items are selected into fourth components – trust of customers, profit of customers, signification of company for customers and possibility to be better. Pumphrey (2004) agree with the utilization of this method for measurement of market orientation. However, this method include only customer orientation, the other components are missed.

Helfert et al. (2002) deals with the redefinition of market orientation. The result of this redefinition was developing method for measurement of market orientation. This method is devoted into 7 components as: efficiency of selling, efficiency of developing performance, efficiency of developing market, analysis of customers from the view of commitments and trusts, relationship management to fulfill the commitments and the ability to gain information. The notice for this method is to add business performance as a component of market orientation. There are absent some of the components of market orientation too.

Vázquez et al. (2002) detected a method for non-profit organizations. The method includes three components – to gain information (13 items), to information dissemination (8 items) and to response to the information (10 items). Items are adapted to the condition of non- profit organization; it is not possible to apply it for other branches.

Farrelly and Quester (2003) developed a method for measurement of market orientation as a part of wide research reflected commitments and trusts from sponsoring. Market orientation is measured by 8 items. These items are selected for the three components: to gain information, information dissemination and response to information. The items are based on MARKOR, MKTOR, Conduit and Mavondo and Dawes. These items are adapted to the condition of sponsoring; it is not possible to apply it for other branches.

Pulendran et al. (2003) showed market orientation as dependent on marketing plans. Pulendran et al. have used for measurement of market orientation MARKOR. General perspective, rational perspective, political perspective and interactional perspective are filled to the MARKOR. All of components are investigated from the view of plans and interfunctional co-ordination. This method does not include all necessary components which the method for measurement of market orientation has reflected.

Varela and Río (2003) introduced MOB - implementation of MARKOR. MOB includes 6 components: intensity of gaining information, the speed of utilization information, effort of information dissemination, ready of information dissemination, plans of market-oriented response and implementation of market-oriented response. This method is not a new; it is adaptation of MARKOR used to know relation between reasons and consequences of market orientation.

Bigné et al. (2004) developed method implemented on MARKOR and MKTOR. This method includes some items from other method too, as price policy, market tendency, segments identification, new products success, stimulation for including the changes to the strategy and fluently information between customers and companies. Method contains 16 items and the components are end-customers and distributors.

We can see the shortcomings to the methods used for measurement of market orientation. A lot of methods include only a few components of market orientation. Customer orientation, competitor orientation and interfunctional co-ordination are the most named. The other components of market orientation are missed. Some other methods have different problem – they contains items of business performance. Business performance is not a component of market orientation; it is the consequence of market orientation. These methods are limited from other application. Components of these methods are named in appendix.

3. New Method for Measurement of Market Orientation

We will introduce a new method for measurement of market orientation in this part of the paper. We tried to eliminate shortcomings criticized in other methods, we considered aspects determined in the executed analysis of all the aforementioned problematic areas of market orientation by creating the new method. The New method for measurement of market orientation is based on of 7 degree Likert scale. The questionnaire containing the market orientation measurement is intended for top managers of organizations.

The selection of measured items follows particularly from the determination of elements influencing the degree of market orientation contained in the proposed model, while the present manner of measurement by means of the Likert scale shall be observed. Newly created items are divided to three main fields – external environment analysis, branch environment analysis and internal environment analysis.

Branch environment analysis is further divided to the analysis of customers; both end ones and distributors, the analysis of competitors and the newly introduced field regarding the analysis of suppliers. The suppliers are included for the first time for measurement of market orientation. Suppliers could play certain role in market orientation. First, suppliers have the significant role in the fields characterized by a high bargaining power of suppliers. Second, managers could have suitable information about potential suppliers and their offers. Third, brand and image of suppliers can also be important with regard to the selection of a final customer; the existence of suppliers with good image adds higher value to the final product from the point of view of the public. Fourth, regular discussions on problems of suppliers can enrich both discussing parties as well, because some persistent problems or misunderstandings may be cleared out on both sides and potential solutions suitable for both parties can be found. Fifth, mutual co-operation with suppliers on the development of new technologies can contribute to the finding of a faster and more effective solution.

The internal environment analysis is divided to the analysis of the use of the acquired information in the process of decision-making and the analysis of interfunctional co-ordination. When creating the items of measuring we followed from the following methods: Hooley et al. (1990), Gima (1995), MOS Lado, Olivares and Rivera (1998), Farrell (2002), Helfert et al. (2002) and Bigné et al. (2004).

3. Discussion

The method for measurement of market orientation proposed in this manner was compiled to the form of a questionnaire; some items were changed to the inversion ones[1] and were confronted with opinions of students attending the second year of the MBA course at the Faculty of Business and Management.

According to Churchill's concept, the new constructed method has to be verifying of validity. Cronbach alpha is usually using for verification the method in area of market orientation. Cronbach alpha (1) can be defined as a function of the number of the tested items and an average internal correlation [2] among items:

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[1] i.e. the reversed items

[2] Internal correlation is based on the correlation coefficient. The correlation coefficient r_{xy} (2) belongs among the most frequently used methods examining dependence of two variables. It is a proportion of co-variation s_{xy} (3) of both variables (the rate of their joint movement) to the product of their standard deviations s_x and s_y (4,5)

$$r_{xy} = \frac{s_{xy}}{s_x \cdot s_y}, \qquad (2)$$

$$s_{xy} = \frac{1}{n}\sum_{i=1}^{n}(x_i - \bar{x})\cdot(y_i - \bar{y}), \qquad (3)$$

$$s_x = \sqrt{(\overline{x^2} - \bar{x}^2)}, \qquad (4)$$

$$\alpha = \frac{N \cdot \bar{r}}{1 + (N-1) \cdot \bar{r}}, \text{ where}$$

N = number of items of correlation
$\bar{r}$ = average of internal correlation among items (1)[3]

To verify the validity of measuring this new method of the market orientation the Cronbach alpha coefficient is used[4]. During calculation we followed from questionnaires filled in by MBA students.

The Cronbach alpha coefficient was determined for all partial parts of the proposed measuring method, see Table no. 1.

Elements of measurement	***Cronbach alpha coefficient***
External environment	0.81
Final customers	0.9336
Distributors	0.9579
Competitors	0.8555
Suppliers	0.8901
Reflecting the knowledge on the decision-making process	0.8265
Inter-functional co-ordination	0.9774
Total for the measuring method	***0.893***

Table no. 1: The value of Cronbach alpha coefficient for the proposed method

The value of the Cronbach alpha exceeds the value of 0.8 for all elements, for items concerning the analysis of final customers, distributors, inter-functional co-ordination it exceeds the limit of 0.9. The resulting value of Cronbach alpha for the whole proposed measuring method of market orientation is 0.893, which means the proposed method can be used for the market orientation measuring, see Tomášková (2005).

$$s_y = \sqrt{(\overline{y^2} - \bar{y}^2)}\,. \qquad (5)$$

[3] What does Cronbach's alpha mean? [Online]. [quotation 2004-04-03]. Available at: <http://www.ats.ucla.edu/stat/spss/faq/alpha.html>.

[4] This approach, however, was not adhered to for all methods measuring market orientation and due to it many methods are criticized. The best-known and the most used methods during the proposal of which this methodological concept was omitted is the MARKOR and MKTOR method.

4. Conclusion

A lot of methods for measurement of market orientation include only a few components of market orientation. The most often mentioned components are orientation on customers, orientation on competition and interfunctional co-operation. The other components of market orientation are usually missed out. Some methods of market orientation include the items connected with business performance; business performance is not the item of market orientation, it is the component influenced by market orientation.

The New method eliminates these shortcomings and fulfils the conditions of validity according to of Cronbach alfa. To measure market orientation is recommended to use this method. This method was used for measurement of market orientation in some important companies, which produce electric equipment and distribute electric energy in the Czech Republic. The second using of this method is to measure market orientation in hi-tech firms in the Czech Republic. It could help to detect the barriers of market orientation implementation. This project is supported by Grant Agency of the Czech Republic (GA 402/07/1493).

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Appendix 1

Components of method used for measurement of market orientation

Author	***Components of market orientation***
Kohli and Jaworski (1990)	Gaining information Information dissemination Information response
Narver and Slater (1990)	Customer orientation Competitor orientation Interfunctional co-ordination
Hooley et al. (1990)	Customer orientation Competitor orientation
Liu (1993)	Interfunctional co-ordination Customer orientation
Deng and Dart (1994)	Customer orientation Competitor orientation Interfunctional co-ordination Profit orientation
Gima (1995)	Gaining of information (customer) Strategy developing (customer) Implementation of market orientation (customer)
Fritz (1996)	Customer orientation
Lado, Mayderu-Olivares and Rivera (1998)	*Gaining information and analysis:* End-customer Distributor

	Competitor Environment *Interfunctional co-ordination and strategy:* End-customer Distributor Competitor Environment
Gray et al. (1998)	Customer orientation Competitor orientation Interfunctional co-ordination Information response Profit orientation
Deshpandé and Farley (1998)	Customer orientation
Kumar, Subramanian, Yeager’s (1998)	Customer orientation Competitor orientation Interfunctional co-ordination
Oczkowski and Farrell (1998)	Gaining information (Customer, competitor, interfunctional co-operation) Information dissemination (Customer, competitor, interfunctional co-operation) Response on the information (Customer, competitor, interfunctional co-operation)
Avlonitis and Gounaris (1999)	Interfunctional co-ordination Competitor orientation
Cadogan et al. (1999)	Gaining information Information dissemination Information response Profit orientation Orientation on some components of external environment
Akimova (2000)	Competitor advantage orientation Response to hostility environment
Dawes (2000)	Customer orientation Information dissemination (to customers) Competitor orientation

	Information response Orientation on some components of external environment
Harrison-Walker (2001)	Competitor orientation (Gaining information, information dissemination, interpretation and response) Customer orientation (Gaining information, information dissemination, interpretation and response) Business performance orientation
Farrell (2002)	Customer orientation Interfunctional co-ordination Orientation on some components of external environment
Hajjat (2002)	Customer orientation
Helfert et al. (2002)	Customer orientation Profit orientation Interfunctional co-ordination Gaining information
Vázquez et al. (2002)	Gaining information Information dissemination Information response
Farrelly and Quester (2003)	Gaining information Information dissemination Information response
Pulendran et al. (2003)	General aspect Rationalization aspect Politic aspect Interaction aspect Business performance orientation
Varela and Río (2003)	Gaining information Information dissemination Information response Orientation on some components of external environment
Bigné et al. (2004)	Competitor orientation

	(Gaining information, information dissemination, interpretation and utilization) End-customer orientation (Gaining information, information dissemination, interpretation and utilization) Distributor Orientation Orientation on some components of external environment Interfunctional co-ordination

Appendix 2

New method for measurement of market orientation
Items of questionnaire

<u>External Environment</u>

This part of the measuring contains the following items:

1) We regularly monitor changes in the field of laws, social, economic and technological changes.
2) We regularly identify important opportunities and threats, which could have an impact on business.
3) We do not participate in events, which demonstrate our economic utility (i.e. sponsoring, charity events, etc.). (R)[5]
4) We try to co-operate with universities and research institutes to be able to apply the latest research methods, which will bring higher value to customers.

<u>Branch Environment</u>

Final customers

1) We regularly analyze factors, which influence purchase behavior of customers.
2) We do not regularly monitor the development of demands of current and prospective customers. (R)
3) We try to apply individual approach to customers.
4) We offer a wide range of after-sale services.
5) We regularly determine the degree of final customer satisfaction.
6) We know what image our products have at customers.
7) We determine why potential customers have not bought our product yet.

Distributors

1) We monitor the development of demands of distributors.
2) We apply individual approach towards distributors.
3) We monitor image of our products at distributors.
4) We regularly measure satisfaction of distributors of our products.
5) We do not let us regularly inform on promotional events of our products carried out by distributors. (R)
6) Our marketing strategy is compatible with the goals of distributors.
7) We speak with distributors about their problems.

[5] (R) – reverse question

Competitors
1) We perform regular monitoring of the development of competitors and their marketing policies.
2) We try to predict behavior of our main competitors.
3) We do not know strong and weal points of our main competitors. (R)
4) We regularly analyze competitive strategies of our main competitors.
5) We carry out benchmarking towards main competitors.

Suppliers:
1) We carry out regular analysis of offers of our present and potential suppliers.
2) We carry out regular analysis of image of our present and potential suppliers.
3) We do not carry out regular analysis of the approach of suppliers to our requirements. (R)
4) We regularly discuss with our suppliers their problems.
5) We do not co-operate with our suppliers in the development of new special technologies (new products). (R)

<u>Internal Environment Analysis</u>
Reflecting the acquired information on the process of decision-making:
1) We implement the acquired information to our decisions.
2) We offer products reflecting the latest demands and wishes of customers (distributors).
3) We focus on gaining customers, for whom we can achieve a competitive advantage.
4) We are faster in responding to the wishes of customers than our competitors.
5) We respond as fast as possible to the marketing events of competitors.

Inter-functional co-ordination analysis:
1) Every worker knows his competences and responsibilities.
2) Every worker is acknowledged with main objectives of the organization and knows how to contribute to their achievement.
3) We analyze comments of employees.
4) We do not pay attention to further education of our employees. (R)
5) We prefer team work and mutual co-operation.
6) We regularly hold meetings, where we discuss about our successes, inform on new opportunities and threats, set new tasks and discuss with all lower-level managers.
7) We try to be flexible.
8) We prefer reaching long-term goals to short-term ones, the achievement of a certain market share to financial goals.
9) All partial goals follow from, develop and support the main goal of the company.
10) We take a positive approach to innovations.
11) Managers of all departments do not express their opinion to the created plan. (R)
12) Relationships between superiors and subordinates cannot be defined as very strict and formal.
13) We pay attention to the exchange of information among individual departments of the organization.
14) In our business we try to take into account the ethics of business and make ethical decisions.