THESIS OF THE DOCTORAL (PhD) DISSERTATION

MARKET ORIENTATION AND HOLISTIC MARKETING AMONG HUNGARIAN FOOD INDUSTRIAL SMES

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1. BACKGROUND, OBJECTIVES AND HYPOTHESES OF THE RESEARCH

The topic of my dissertation and research is corporate market orientation among Hungarian food industrial small- and medium sized enterprises. Market orientation is a corporate philosophy, approach and behaviour that realizes the marketing concept into practice. A market oriented company can create customer value more efficiently and effectively than other non-market oriented companies. (KONTOR, 2014b; GHEYSARI et al., 2012).

The competitiveness of the domestic food industry and the SME sector, in particular the competitiveness of food SMEs, is a constant issue on the agenda of economic decision-makers. The SME sector accounts for more than 99% of businesses and plays an important role in employment (SMEs employ nearly two-thirds of the workforce) and creation of value added. The importance of the food industry is reflected in the fact that, as the world population grows, it is under increasing pressure to meet growing demand, and the whole food economy itself is subject to geographical and natural constraints due to the nature of the commodities. In summary, the domestic food industry, and thus food SMEs, become a priority national strategic issue because of the food supply issue for the population and their role in income production and distribution (BENE, 2018).

It is clear that it is important for the competitiveness of the food SME sector that it is made up of companies that can profitably produce value for consumers over the long term. This is supported by the adaptation of market orientation and a market-oriented organisational culture and behaviour. In order to improve the competitiveness of the sector and companies through the development of market orientation, it is necessary to study the topic, which can reveal the components of market orientation, the cultural and behavioural elements that can make an organisation market oriented. However, in order to identify the areas for improvement, we need a better understanding of the market orientation of the company and a measurement tool to model, measure and thus examine it.

Over the past nearly 50 years, several solutions and methods have been developed, of which two stand out in practice: the MKTOR and the MARKOR scales. However, both models are over 30 years old (TOMÁSKOVA, 2009). The economy, the market and competition have changed since their creation. It is clear that there is a need to update the models, perhaps to

put market orientation on a new base. For these reasons, I have defined the following objectives for my research:

C1. To study, test and adapt methodological options for measuring market orientation for domestic food SMEs.

C2. Development of a new model based on the most modern marketing concept, the holistic marketing concept.

C3. Creating groups of companies based on their market orientation.

C4. Examining the impact of market orientation on corporate performance.

C5. Comparing market orientation measurement scales.

C6. Identify areas for improvement for companies related to market orientation.

In a previous research, my co-authors and I compared the MARKOR and MKTOR scales for domestic food and agricultural SMEs in an empirical study. As a result, we conclude that the MKTOR scale seems to be more suitable for the assessment of market orientation in the scope of the study (KOVÁCS et al., 2017). Furthermore, as in other studies (TOMÁSKOVA, 2009; BAREITH, 2013), we found that the scale needs to be adapted and modernised. Therefore, based on objective C1, I formulate the following hypothesis:

H1. The MKTOR model needs to be adapted to measure market orientation of Hungarian food industrial small- and medium sized enterprises.

Research method: exploratory factor analysis, confirmatory factor analysis, test of construct validity and reliability of the MKTOR model, based primary survey data.

Market orientation can be understood as the implementation of the marketing concept in practice (KONTOR, 2014b; GHEYSARI et al., 2012), but the concept of marketing has evolved over the last 50 years, and according to KOTLER - KELLER (2016) the most modern marketing approach today is the holistic marketing concept. It seems logical that if I want to put market orientation on a new base, I should use the holistic marketing concept as a starting point, so I have defined the following hypothesis based on my C2 objective:

H2. Based on the holistic marketing concept, a holistic market orientation model (HOPO) can be created that meets the requirements of validity and reliability.

Research method: development of a measurement model based on a literature review, test of face, content, predictive, convergent and discriminal validity, test of reliability, EFA and CFA analysis based on primary data.

Cluster analysis is a frequently used method in empirical studies of market orientation, preferred by many researchers because it is relatively easy to implement and the analysis provides results that can be easily translated into practice (BERÁCS, 2003; POLERECZKI 2011). Based on objective C3, I formulate the following hypothesis:

H3: Companies in the market-oriented group have better corporate performance (profitability, relative performance, customer satisfaction) than the other groups.

Research method: clustering food industrial SMEs based on the MKTOR scale, using analysis of variance to test for differences between groups in terms of firm performance.

A key question in market orientation research is whether adapting a higher level of market orientation leads to higher or better corporate performance. This is why most market orientation studies focus on the relationship between performance and market orientation. And most of the research agrees that there is a positive, weak/moderate connection between them (KOVÁCS et al., 2016; CEGARRA-NAVARRO – RODRIGO-MOYA, 2007; BERÁCS, 2003). Based on objective C4, I formulated the following hypotheses:

H4a. Holistic Market Orientation (HOPO) and Market Orientation as measured by the MKTOR scale have a positive, significant effect on the corporate performance.

H4b. Holistic market orientation (HOPO) and market orientation as measured by the MKTOR scale have a positive, significant effect on the relative advantage of the companies.

H4c. Holistic Market Orientation (HOPO) and Market Orientation as measured by the MKTOR scale have a positive significant effect on consumer satisfaction of the companies.

Research method: structural equation modelling based on primary data.

For research purposes, it is logical to compare the MKTOR scale and holistic market orientation. Most research considers corporate performance as a consequence of market orientation (TOMÁSKOVA, 2009). Therefore, I think that the market orientation model that has a stronger relationship with the corporate performance is more appropriate. Based on objective C5, I formulated the following hypothesis:

H5. Holistic market orientation (HOPO) has a greater impact on corporate performance dimensions (effectiveness, relative advantage, customer satisfaction) than market orientation measured by the MKTOR scale.

Research method: structural equation modelling based on primary data.

During my research, I consider it important that my work represents value both in the academic sphere and in practice. This is why my objective C6 was formulated, which requires an analysis of the scales used in order to highlight the cultural or behavioural elements of market orientation that contribute to the corporate performance. In order to make the objectives and hypotheses of my research more understandable, I summarise them and I highlight the chapter of the dissertation where the related result can be found in *Table 1*.

Table 1. Objectives and hypotheses of the dissertation

Sn.	Objective/hypothesis	Chapter
C1	To study, test and adapt methodological options for measuring market orientation for domestic food SMEs.	4.1.
H1	The MKTOR model needs to be adapted to measure market orientation of Hungarian food industrial small- and medium sized enterprises.	
C2	Development of a new model based on the most modern marketing concept, the holistic marketing concept.	2.1., 4.2, 4.6.
H2	Based on the holistic marketing concept, a holistic market orientation model (HOPO) can be created that meets the requirements of validity and reliability.	
C3	Creating groups of companies based on their market orientation.	4.5.3.
H3	Companies in the market-oriented group have better corporate performance than the other groups.	
C4	Examining the impact of market orientation on corporate performance.	4.6.
H4a	Holistic Market Orientation (HOPO) and Market Orientation as measured by the MKTOR scale have a positive, significant effect on the corporate performance.	
H4b	Holistic market orientation (HOPO) and market orientation as measured by the MKTOR scale have a positive, significant effect on the relative advantage of the companies	
H4c	Holistic Market Orientation (HOPO) and Market Orientation as measured by the MKTOR scale have a positive significant effect on consumer satisfaction of the companies.	
C5	Comparing market orientation measurement scales.	4.6.
H5	Holistic market orientation (HOPO) has a greater impact on corporate performance dimensions (effectiveness, relative advantage, customer satisfaction) than market orientation measured by the MKTOR scale.	
C6	Identify areas for improvement for companies related to market orientation.	4.5.3.

Source: own editing, 2023.

2. DATABASE AND METHODOLOGY

My research involved both secondary and primary data collection. The secondary research contributed to a better understanding of the topic, the formulation of the research questions and hypotheses, the development of the empirical research model and questionnaire, and the creation of the Holistic Market Orientation Measurement Model (HOPO). For the primary research, I chose quantitative research in the form of a questionnaire survey in order to test my hypotheses and to obtain information on holistic market orientation among domestic food industrial SMEs.

2.1. Secondary research

In my secondary research, I conducted both national and international literature review. The research included the identification of studies related to market orientation and the allocation of key information on the research subjects (food SMEs). The literature was collected mainly using internet databases and collection sites (Google Scholar, Science Direct, Scopus, Matarka). Secondary (statistical, descriptive) information related to the food economy and SMEs was obtained from statistical databases (CSO, Eurostat, FAO, EMIS). It is important to note that there are differences in many industrial and economic statistics between the databases and publications of the KSH and Eurostat. I do not attempt to resolve these contradictions in the dissertation, but in all cases I indicate the origin of the data.

2.2. Primary research

In market orientation researches, qualitative research is not common (TOMÁSKOVA, 2009), and in my literature review I found only quantitative researches. Partly because of this, and partly because of the quantitative nature of the survey, the questionnaire was chosen to analyse the holistic market orientation model on a larger sample and to generalise the results. This fact was of particular importance in the design of the research, because it allows me to get a comprehensive, generalisable picture of the marketing approach of small and medium-sized enterprises in the domestic food industry. Furthermore, quantitative research opens up the possibility of comparing my results with results of international researches and creates the opportunity for modelling.

Questionnaire

When compiling the questionnaire (Annex 1), it was necessary to take into account the limitations of the data collection. On the one hand, the length of the questionnaire was limited by the respondents' willingness to answer and, on the other hand, by the available financial resources. I compiled the questionnaire in 2019 and had it reviewed by Dr. Enikő Kontor (PhD) and Dr. Zsolt Polereczki (PhD), who are experts in the field, as they wrote their PhD thesis related to market orientation. Taking into account their opinions and suggestions, I developed a questionnaire and I made a pre-visit. For the pilot survey, I constructed the sampling frame based on the EMIS company database with the same filtering criteria that I used for the final sampling frame. I contacted 23 companies by phone, 18 of which I reached and 10 of which agreed to participate in the survey. The primary purpose of the pilot survey was to test the comprehensibility and formulation of the statements of my model for measuring holistic market orientation (HOPO scale). I was able to compare the (qualitative) response characteristics (respondent's thinking time, focus, responding before finishing reading the statement) for the HOPO with a benchmarked and repeatedly tested measure (MKTOR scale). After the pilot survey, I modified some questions based on my experience to make them easier to decode. I also obtained approximate information on the willingness to respond (just over 50%) and the importance of anonymity for the respondents (for understandable reasons given the subject of the survey).

The questionnaire was divided into four main blocks of questions and a short question on the number of employees. The first block of questions included measurement variables for holistic market orientation. The set of statements used to measure holistic marketing is based on KOTLER - KELLER (2016). The second block of questions is the MKTOR scale based on the work of KOHLI - JAWORSKI (1993), which has been used in several domestic studies, and which I have adopted from the dissertation of POLERECZKI (2011). The third set of questions focused on measuring corporate performance. In this section, respondents were asked to answer three questions assessing 15 performance categories. The first question asked about the importance of each performance category (weighting statements), the second question asked about the extent to which the company was able to achieve the targets for each performance category in the previous year (effectiveness), and the third

question asked how the company performed against its main competitor in each performance category. Performance categories were defined based on the work of SAJTOS (2006) and focused on the following categories: profit level; profit margin; return on capital; sales volume; market share; customer satisfaction; customer loyalty; employee satisfaction; return on investment; product quality; company/brand perception; product development; innovation; company owners' expectations of short-term financial performance and company owners' expectations of long-term financial performance. And with the weighting questions, my aim was to be able to assess the performance (efficiency and relative advantage) of the companies in such a way that I could eliminate the differences due to the strategy of the companies, because weighting can eliminate the difference in allocated performance (efficiency or relative advantage) between the cost-leadership and the differentiation strategy. The fourth section contained four statements on subjective consumer satisfaction as perceived by companies, which also based on POLERECZKI (2011).

In the questionnaire, unlike the number of employees (selectively closed question) and the weighting statements related to company performance (0-10 point scale type question), I used only a subjective, self-assessed five-point Likert-type scale in order to facilitate subsequent data analysis, and provided the "don't know/no answer" option for all questions.

Data collection

My research is based on a questionnaire-based telephone survey of 150 small and medium-sized enterprises in the domestic food industry. The survey was conducted in 2019 by Szocio-Gráf Piackutató Kft., based in Pécs. The sampling frame was provided by the Opten company database with the following screening criteria: TEÁOR'08 CE class, corporations, and number of employees less than 250 but not zero. Respondents were selected from the database using Microsoft Excel's random number generator. The questionnaires were completed by the market researcher's staff. They guided the marketing manager (or a manager with sufficient insight into the company's activities) of the surveyed company through the questions. Responses were filtered by the market researcher, which means that respondents who did not answer at least half of the questions were excluded from the sample. Data collection ended when the sample reached 150 items. The survey was confidential, so

the company that collected the data knew the respondent's company information, but did not provide it to me, which was necessary to increase the willingness to respond.

The focus of the research was on food SMEs operating as co-enterprises. The sample is representative in this aspect ($\chi^2(2)=5.51$; $p=0.06$) and the distribution is shown in *Table 2*.

Table 2. Sample by size category

Category	Number (pcs)	Percent (%)
Micro	89	59.3
Small	46	30.7
Medium	15	10

Source: own editing, 2023.

The structure of the population: in 2019, there were 4,566 enterprises registered in the KSH database that met the following criteria: size category is SME (based on the number of employees), TÁOR'08 code is in the CE category (manufacture of food, beverages and tobacco products), corporation with non-zero employees. At a 95% confidence level and a 10% margin of error, the required sample size is 95 based on GILL et al. (2010). Thus, the sample size, structure and sampling method meet the requirements for generalisability (MALHOTRA, 2001).

Modelling and data analysis

The methodology is adapted to my research objectives. Therefore, I will pay particular attention to the validity and reliability of the modelling, and in parallel I will test my further hypotheses. The research used simple descriptive statistical analyses, multivariate tests and hypothesis testing. The main features of the statistical methods used are described below.

Exploratory and confirmatory factor analysis

Exploratory factor analysis is a statistical technique that is used to reduce data to a smaller set of summary variables and to explore the underlying theoretical structure of the phenomena. It is used to identify the structure of the relationship between the variable and the respondent. In my research, EFA was carried out using maximum likelihood estimation, with the rotation chosen depending on which solution alternative was closest to the priori estimation. The factor numbers were determined primarily using the explained variance ratio method and the eigenvalue "rule", but of course I ended up using a priori estimation and the literature. The suitability of the data for factor analysis was determined using the

Kasier-Meyer-Olkin criterion, while the existence of correlation between the observed variables was tested using Bartlett's test (SAJTOS - MITEV, 2007).

In the confirmatory factor analysis, I tested whether my empirical model fit the structure I had previously assumed. In other words, I check whether the factor structure I have assumed (number of latent variables, number of observed variables, number of observed variables belonging to latent variables) holds in my empirical data. For example, based on the literature, the first eight items of the MKTOR scale, as observed variables, define customer orientation as a latent variable, the next five items of the scale (as observed variables) measure competitor orientation (as latent variables), the last four observed variables of the scale define inter-functional cooperation, and these three latent variables together form market orientation.

For my CFA analysis, I used the lavaan package of R, a widely used software package (ROSSEEL, 2012). The lavaan software package provides us with a number of goodness-of-fit indicators for testing the model, of which I used the following in my research, based on HAIR et al. (2010) and HOOPER et al (2008): χ^2 test; CFI; GFI, NNFI (TLI); RMSEA; RFI.

The χ^2 test tests the fit of the theoretical model to the observed data by comparing the hypothesized and empirical covariance matrices. The CFI (comparative fit index), which corrects for the sensitivity of the χ^2 test item count, is generally good above 0.9. The goodness of fit index (GFI) is a measure of fit between the hypothesized model and the observed covariance matrix. The adjusted goodness of fit index (AGFI) corrects the GFI, which is affected by the number of indicators of each latent variable. The GFI and AGFI range between 0 and 1, with a value of over 0.9 generally indicating acceptable model fit. The non-normed fit index (NNFI; also known as the Tucker–Lewis index) resolves some of the issues of negative bias, though NNFI values may sometimes fall beyond the 0 to 1 range. Values for NNFI should range between 0 and 1, with a cutoff of 0.95 or greater indicating a good model fit. The root mean square error of approximation (RMSEA) avoids issues of sample size by analyzing the discrepancy between the hypothesized model, with optimally chosen parameter estimates, and the population covariance matrix. The RMSEA ranges from 0 to 1, with smaller values indicating better model fit. A value of 0.06 or less is indicative of acceptable model fit. The RFI (relative fit index) compares the empirical model

to a theoretical model with zero correlation between the observed variables, it is also above 0.9 acceptable (HOOPER et al., 2008; SARMENTO – COSTA, 2019).

Examinations of validity

We can distinguish between several aspects of validity, we can talk about (1) face validity, (2) content validity; (3) predictive validity; (4) congruent validity; (5) convergent validity and (6) discriminant validity. The latter two (5^{th} and 6^{th}) are collectively called construct validity (KELLY, 1927; CAMPBELL - FISKE, 1959).

The face validity is a category that refers to whether the measurement instrument looks like it measures the construct we want it to. In order to achieve this, it is advisable to aim for a test that is clear and understandable, which can be achieved through pre-testing, pilot testing and, afterwards, confirmatory factor analysis. In my research, I have also carried out a pilot test and a confirmatory factor analysis to test the apparent validity of the model (NEVO, 1985).

Content validity is looking for the answer to following question: is the quality of the test that is available adequate, are we testing all the necessary features? To ensure this, the statements (observed variables) of the test should be a representative sample from the population of possible statements in the construct (BABBIE, 2003). Since I developed the holistic market orientation model based on KOTLER - KELLER (2016) by aiming to use the authors' terminology when formulating the statements of the test and insisting on following their description exactly, I believe that content validity was already ensured during the development of the test.

For predictive criterion validity, researchers often examine how the results of a test predict a relevant future outcome. Most research considers that an adapted level of market orientation has a positive effect on firm performance. One of the objectives of my research is to test this, if I find a positive relationship between holistic market orientation and firm performance, I accept the predictive validity of the model (BABBIE, 2003).

We can speak of congruent validity if the appearance of the construct measured by our model is similar to the measurement result of another (previously tested and accepted) model. That is, the congruence validity of a holistic market orientation is fulfilled if the

holistic market orientation produces a similar result as the market orientation defined by the MKTOR scale (BABBIE, 2003).

Convergent validity poses the question: do our measurement variables correctly measure our latent variables? Very similar to congruent validity, the question is not measuring the similarity of the entire test to another existing test, but focusing on the relationship between the observed variables and the latent variables. In other words, we speak of convergent validity when our observed/measurement variables (statements, items, indicators) measure our latent variables correctly. The AVE (average variance extracted) indicator helps to answer this question. According to FORNELL - LARCKER (1981), the value of the AVE and all factor loadings should be greater than 0.5. The AVE can be calculated as the sum of the factor loadings squared divided by the number of observed variables.

Discriminant validity specifically measures whether constructs that theoretically should not be related to each other are, in fact, unrelated. To test it we can use the Fornell-Larcker criterion, according to which the square root of the AVE must be greater than the correlation coefficient of the latent variable under study with any other latent variable (NAGY - BERNSCHÜTZ, 2017), this can be described by the following formula:

$$AVE \geq max\left(\frac{\sum_{i=1}^{n}(x_i-\bar{x})(y_i-\bar{y})}{(n-1)s_x s_y}\right)^2 \text{ , where}$$

n= number of items,

AVE=average variance extracted,

$x_i; y_i$= the i-th element of x and y,

$\bar{x}; \bar{y}$= mean of x and y,

$s_x; s_y$= standard deviation of x and y.

Reliability test

The reliability tests focused on the scales used. Reliability in this case refers to how reliably the scales used measure a given latent variable, in other words, how consistently they can be repeated with the same results. There are basically two ways to test it: (1) test-retest or external reliability and (2) internal consistency or internal reliability (KÁRÁSZ et al., 2022). Since one data collection has been done and there is currently no possibility to repeat the data collection, only internal consistency testing is possible. The measurement of internal

consistency can be carried out by simple correlation calculations, but a more reliable solution is offered by correlation calculations based on test-half correlation (Cronbach's alpha, McDonald's omega) and by dimensionality indicators based on various factor analyses, of which the best known is perhaps the CR (composite reliability) indicator (CORTINA, 1993). In my dissertation, I chose these three indicators to test the reliability of the scales. Cronbach's alpha is calculated by taking a score from each scale item and correlating it with the total score for each observation. The resulting correlations are then compared with the variance for all individual item scores. Cronbach's alpha is best understood as a function of the number of questions or items in a measure, the average covariance between pairs of items, and the overall variance of the total measured score. Omega is an adjusted version of the alpha indicator, which is less sensitive to variance. The advantage of these two indicators is that they are easy to calculate in most statistical programs and have the same interpretation, with values above 0.7 generally considered acceptable (CRONBACH, 1951; PETERSON - KIM, 2013; MCNEISH, 2018).

The CR indicator already takes into account that each measurement variable contributes different weights to the latent variable. It adopts the same meaning as alpha and omega. The indicator can be calculated from standardized factor loadings and the error of the estimate, calculated according to RAYKOV (1997) using the following formula:

$$CR = \frac{\left(\sum_{i=1}^{n} \lambda_i\right)^2}{\left(\sum_{i=1}^{n} \lambda_i\right)^2 + \sum_{i=1}^{n} \varepsilon_i}, \text{where}$$

n= number of items

λ= standardized factor loadings

ε= error or 1- λ^2.

Structural equation modelling (SEM)

The simplest interpretation of structural equation modelling (SEM) is that it allows simultaneous multiple multivariate regression and factor analysis. Within the method, two approaches are known: CB-SEM (based on covariance) and PLS-SEM (based on partial least squares). In my research, I chose CB-SEM, which is advantageous because it provides a wider range of indicators of model fit and is the appropriate technique for testing theory and confirming research models, according to some literature (DASH - PAUL, 2021). To

assess the fit of the SEM models, I use the fit indicators described in the CFA analysis. In my SEM study, I used a maximum likelihood (ML) estimation, which requires multivariate normality between measurement variables belonging to the same latent variable. In my case, this requirement is not met in any of the cases. However, several studies point out that normal distribution is relatively rare in the social sciences (BENTLER - CHOU, 1987; BARNES et al., 2001), nevertheless the maximum likelihood estimator is robust enough to be used in the case of non-normal distribution (DIAMANTIPOULOS at al, 2000; BOLLEN, 1989), especially when a sufficiently large sample is available, because sample size can reduce the problems arising from the absence of a multinormal distribution (HAIR et al., 2010).

Applied hypothesis tests and correlation analysis

To compare the means of two groups, I used the Mann-Whitney non-parametric rank test. The null hypothesis is that the medians of the two groups are equal (HUNYADI - VITA, 2006).

I used variance analysis to compare the means of several groups. The null hypothesis of the analysis of variance is that the means of the groups are the same. Although analysis of variance is a parametric test and requires a normal distribution of variables, it is sufficiently robust and can be used for variables that deviate slightly from the normal distribution, i.e. if the skewness and kurtosis of the variable are below one in absolute value, analysis of variance can still be used safely (GLASS et al., 1972; HARWELL et al., 1992; LIX et al., 1996). Since the test (ANOVA) only gives the information that there is/is not a significant difference in a mean (as expected value in the mean), I saw it appropriate to then perform a post-hoc test (Tukey HSD) to find out exactly which groups have a higher or lower mean per pair (HUNYADI – VITA, 2006).

The relationship between two variables measured on a metric scale was tested by Pearson's correlation calculation (SAJTOS - MITEV, 2007).

Applied software

The analyses were performed using three software: the CFA analyses and the SEM were performed in R Studio editor using R Statistics version 3.4.2, with the following plug-ins: psych and lavaan. Descriptive statistics, hypothesis testing and cluster analysis were

performed in IBM SPSS version 23, while the AVE and CR indicators and firm performance were calculated manually in Microsoft Excel.

3. MAIN FINDINGS OF THE DISSERTATION

I will present my conclusions drawn from the results of my secondary and primary research along the objectives and hypotheses of my thesis and briefly summarise the methods and results used to reach these conclusions.

I accept hypothesis H1 (chapter 2.3rd, 2.4th and 4.1st).

H1. The MKTOR model needs to be adapted to measure market orientation of Hungarian food industrial small- and medium sized enterprises.

In chapter 2.3rd of my dissertation, I presented the studies that dispute the suitability of the MKTOR or MARKOR scales in today's practice, and in chapter 2.4.3rd I presented my research history on the suitability of the two scales. Furthermore, through my primary research, I studied the market orientation adapted by domestic food SMEs based on the MKTOR scale. The EFA and CFA analyses (chapters 4.1.1st and 4.1.2nd) have shown that the model needs a major overhaul. On the one hand, I could not identify the dimension of interfunctional cooperation between functions in the MKTOR model. The primary explanation for this may be that, due to the organisational and managerial characteristics of SMEs, the separation of functions and thus the cooperation between functions is not even meaningful in most cases. Furthermore, two statements from the customer orientation dimension that focused on the company's customer-oriented strategy were dropped, which presumably leads to the conclusion that the strategy itself may be missing. The statement that was dropped from the competitor orientation dimension focused on the company's positioning strategy, which suggests that again, companies have problems with their strategy, they are not able to develop strategies that differentiate them from their competitors.

I accept hypothesis H2 (chapters 4.2nd; 4.5th and 4.6th).

H2. Based on the holistic marketing concept, a holistic market orientation model (HOPO) can be created that meets the requirements of validity and reliability.

Based on the holistic marketing concept of KOTLER - KELLER (2016), I developed a set of statements to measure holistic market orientation (HOPO) (chapter 2.1st). The HOPO model has been subjected to a pilot test and reviewed by researchers with expertise in the field. The scales of the model meet the content validity due to the technique used to develop

it. To test the face validity, I performed a CFA analysis, which showed a good fit (chapter 4.2.2nd). This required a modification of the scale. The statements measuring performance in the performance marketing dimension were moved to integrated marketing and the remaining statements in the factor were attributed to the company's socially oriented thinking, so I renamed this dimension the social based marketing orientation. However, in my view, this does not call into question KOTLER - KELLER's (2016) interpretation of the HOPO model, as social marketing is a previous stage in the evolution of the marketing concept, and the claims made about performance marketing can be understood as a manifestation of integrated marketing.

The predictive validity has been demonstrated in the structural equation modelling (chapters 4.6.1st and 4.6.3rd), as there is a significant positive effect of the level of market orientation measured by HOPO on firm performance (β=0.674, $p<0.01$) and customer satisfaction (β=0.446, $p<0.01$), which can be interpreted as consequences of market orientation according to the literature (KONTOR, 2014). The HOPO model demonstrated the congruent validity when analysing groups based on the MKTOR scale (chapter 4.3rd). Variance analysis showed that all dimensions of HOPO (integrated marketing: $F(3)=12.733$, $p<0.01$; relationship marketing $F(3)=5.761$, $p<0.01$; internal marketing $F(3)=7.315$, $p<0.01$; social marketing $F(3)=3.832$, $p<0.01$) were significantly different for the market-oriented group compared to the level of HOPO dimensions adapted by the other groups. Construct validity for HOPO can be justified on the basis of the modifications to EFA and CFA, both in terms of diversity validity and convergent validity (chapter 4.2.3rd), and the reliability of the model can be accepted on the basis of its reliability indicators. These results confirm the validity and validity of the HOPO model.

I reject hypothesis H3 (chapter 4.5.3rd).

H3. Companies in the market-oriented group have better corporate performance than the other groups.

Based on the degree of customer and competitor orientation adapted by the companies, I have developed four groups: inward-looking, customer oriented, competitor oriented and market oriented. I used variance analysis to test whether there were differences between the groups on any of the dimensions of firm performance examined. I did not identify any significant difference between the four groups in terms of effectiveness ($F(3)=1.125$,

p=0.341), relative advantage (F(3)=2.201, p=0.092) or consumer satisfaction (F(3)=1.128, p=0.283). The reason for this is probably that market orientation explains only a small part of a firm's performance dimensions (as shown in the SEM results) and this small part is not sufficient to show the difference in performance between market orientation profiles.

In relation to my C4 objective, I tested three hypotheses on the relationship between market orientation and performance dimensions, built three SEM models, which had in common that in each case HOPO and MKTOR PO were included as independent variables in the model, while the three models differed in the dependent variable, which was the performance dimension (model 1st: effectiveness; model 2nd: relative advantage; model 3rd: consumer satisfaction).

I accept hypothesis H4a (chapter 4.6.1st).

H4a. Holistic Market Orientation (HOPO) and Market Orientation as measured by the MKTOR scale have a positive, significant effect on the corporate performance.

In SEM model 1st, both MKTOR PO and HOPO have a significant impact on the company's performance at 99% confidence. All standardised regression coefficients are positive, which is consistent with the theoretical assumption. The model fit indicators are adequate. First-order latent independent variables (measurement variables) explain nearly 20% of the variance in the model's dependent variable (effectiveness). This coefficient of determination value is similar to the results of other research (KISS et al, 2020). These results can be interpreted as a positive contribution of holistic market orientation and MKTOR-based market orientation to firm performance.

I reject hypothesis H4b. (chapter 4.6.2nd).

H4b. Holistic market orientation (HOPO) and market orientation as measured by the MKTOR scale have a positive, significant effect on the relative advantage of the companies.

In SEM model 2nd, I examined whether the MKTOR PO and HOPO as latent variables have a significant effect on the relative advantage of firms. Already the fit indicators of the SEM model indicate a problem, as neither the chi-square test nor the fit indicators indicate that the model is not appropriate. However, the standardized coefficients also show that neither MKTOR PO nor HOPO has a significant effect on relative advantage. Therefore, in this case, it is unnecessary to evaluate the results and reject the above hypothesis. However, I

think it is important to point out that in the case of SEM model 2nd, the variables were in such a combination (and the relative advantage had a low propensity to respond) that the sample size was very low, which may explain the imperfections in the model fit.

I accept hypothesis H4c. (chapter 4.6.3rd).

H4c. Holistic Market Orientation (HOPO) and Market Orientation as measured by the MKTOR scale have a positive significant effect on consumer satisfaction of the companies.

The results of the 3rd SEM model show that both the MKTOR PO and the HOPO have a significant impact on the perceived consumer satisfaction at the 95% confidence level. All standardised regression coefficients are positive (β_{HOPO}=0.45, β_{MKTOR}=0.35), which is in line with the theoretical assumption. The model fit indicators are adequate. The explanatory variables and the measurement variables explain almost 24% of the variance of consumer satisfaction (as the outcome variable of the model). Summary data for the SEM models are shown in *Table 3*.

Table 3. Results of structural equation modelling

Variables			model 1st		model 2nd		model 3rd	
			β	***p*-value**	***β***	***p*-value**	***β***	***p*-value**
customer orientation	→	MKTOR PO	0.643	<0.01	0.592	<0.01	0.607	<0.01
competitor orientation	→	MKTOR PO	0.54	<0.01	0.484	0.433	0.485	<0.01
integrated marketing	→	HOPO	0.733	<0.01	0.671	<0.01	0.722	<0.01
internal marketing	→	HOPO	0.538	<0.01	0.469	0.088	0.564	<0.01
social based marketing	→	HOPO	0.255	<0.01	0.591	0.112	0.363	<0.01
relationship marketing	→	HOPO	0.555	<0.01	0.299	<0.01	0.537	<0.01
MKTOR PO	→	effectiveness	0.465	0.045				
HOPO	→	effectiveness	0.672	0.013				
MKTOR PO	→	relative advantage				1.121	0.979	
HOPO	→	relative advantage				-0.936	0.983	
MKTOR PO	→	consumer satisfaction					0.355	0.036
HOPO	→	consumer satisfaction					0.446	0.022
N			140				108	
R^2			0.199				0.073	
df.			12				12	
χ^2			12.139				19.649	
p-value			0.435				0.074	
CFI			0.999				0.917	
GFI			0.977				0.951	
NNFI			0.946				0.886	
RFI			0.927				0.827	
RMSEA			0.009				0.097	

Source: own editing, 2023

I accept hypothesis H5. (chapters 4.6.1st and 4.6.3rd).

H5: Holistic market orientation (HOPO) has a greater impact on corporate performance dimensions (effectiveness, relative advantage, customer satisfaction) than market orientation measured by the MKTOR scale.

In the second SEM model explaining relative advantage, I found no significant relationship between market orientation and relative advantage, but in the first and third SEM models it is clear that holistic market orientation has a greater effect on both effectiveness (β_{HOPO}=0.67, β_{MKTOR}=0.47) and consumer satisfaction (β_{HOPO}=0.45, β_{MKTOR}=0.35) than the level of market orientation measured by the MKTOR scale. This suggests that the holistic market orientation model is a better measure of the level of market orientation if we accept the assumption that market orientation leads to improved firm performance.

Research limitations and future research

The main limitations of the research were the data collection possibilities. If it were possible to extend the questionnaire, it would be useful to include other potential market orientation areas in the study. It would be advisable to include factors such as corporate strategy, the organisational structure of the company and the capabilities of the marketing organisation as control variables. In addition to the number of employees, additional background variables (type of operation, age of the company) would broaden the scope of the research. It would be worth investigating whether the presence of a company in B2B or B2C only or in both B2B and B2C markets has an impact on market orientation. It would be a great improvement if objective performance elements could be included instead of subjective performance measures. Although the present research focused on the small and medium-sized enterprise sector and it was important that the sample was representative by size category, it would be worth testing the effect of firm size on market orientation on a sample with a similar proportion of size categories (or at least on a sample with a larger number of medium-sized enterprises). A further research opportunity could be to test the holistic market orientation model in other industries and companies.

4. NEW AND NOVEL RESULTS OF THE THESIS

(1) I consider it a new result of my dissertation that I adapted the MKTOR scale to measure the market orientation of domestic food SMEs on a sample, the results of which can be generalized. I conclude that the MKTOR model for measuring market orientation of domestic food SMEs is outdated and that the interfunctional coordination dimension has got a limited use in the scope of study.

(2) My new result is that based on the holistic marketing concept introduced by KOTLER - KELLER (2016), I developed the Holistic Market Orientation (HOPO) model, which I validated and tested, and I found it more suitable for measuring the market orientation of domestic food SMEs than the MKTOR scale.

(3) My novel result is that I have determined the distribution of domestic food SMEs based on the metrics of the market orientation matrix. I classified the companies into four groups: inward-looking (24%), customer-oriented (20%), competitor-oriented (16%) and market-oriented (40%).

(5) As a novel result, I have identified a positive, weak/medium-strength, positive relationship between the market orientation model (HOPO) I developed and the dimensions of the MKTOR scale.

(6) My main findings include specific recommendations for non-market-oriented companies to improve their market orientation.

5. PRACTICAL USABILITY OF THE RESULTS

In relation to my objective C6, I will describe the factors in which market-oriented companies differ significantly from introverted companies. These are also my practical suggestions for improving market orientation.

Of course, it is also useful to improve the market orientation of companies that either only lag behind the market-oriented ones in customer orientation (they are the competitor-oriented ones) or only in competitor orientation (they are the customer-oriented ones). For this purpose, I compared the market orientation matrix with the MKTOR and HOPO scales using the Mann-Whitney test, the results of which are presented in Annex 2 of this dissertation.

- Corporate objectives should be set with a focus on meeting consumer needs, measuring consumer satisfaction and paying close attention to after-sales services. At the same time, this requires the regular collection of information about customers, which should be given high priority when making decisions.
- Marketing activities need to be coordinated, planned (products, pricing, sales, marketing communication) and their impact on other activities taken into account. The effectiveness and efficiency of marketing activities should be measured and financial and profitability considerations should be taken into account when marketing decisions are taken. Ethical, environmental, legal and social considerations should be taken into account when making marketing decisions.
- Marketing should not be the responsibility of one person or department, it should be seen as a company-wide activity. Internal marketing (e.g. internal PR) should be developed with the organisation's internal stakeholders, including communicating marketing and market objectives internally to employees, managers, owners, because marketing activities inside the company are as important as those outside the company.
- Try to build long-term relationships with stakeholders who can influence the success of the company. Company leaders should keep in touch with current and prospective future partners. Information about competitors should be shared within the

organisation. It is advisable to gather information about competitors on a regular basis.

In addition, I also suggest that we should not be afraid of using market orientation scales as a self-diagnostic tool. The scale is thus a self-report test, the evaluation of which is very simple. Each dimension can be assessed by summarising or averaging the responses to the statements. Averaging (as a data reduction solution) is the most obvious, because in this case the dimension can be scored between 1 and 5, a value below 3 indicates the absence of a characteristic, while a value above 3 indicates the presence of a characteristic. It can be used to identify areas where the enterprise needs to improve.

SUMMARY

The competitiveness of domestic food industrial SMEs has got a huge importance, because they play an important role in employment and the creation of added value. A determining factor of their competitiveness is market orientation, which plays a major role in creating outstanding customer value, therefore, it is important to understand, examine and measure market orientation.

Market orientation is the practical implementation of the marketing concept. While the thinking about the marketing concept has developed a lot in the last 30-50 years, most of the research related to market orientation still follows the methods developed 50 years ago. During this time, not only marketing thinking developed, but also the market and the economy changed radically. This is the reason why it becomes necessary again to think about market orientation and to try to update market orientation approaches. The main objective of my doctoral dissertation is to develope a model that is based on the most modern marketing thinking, which is the holistic marketing concept. For this purpose, I conducted secondary and primary research. With my secondary research, I prove that the MARKOR and MKTOR scales are now outdated. Also with secondary research, I developed the holistic market orientation scale based on KOTLER - KELLER (2016).

My primary research is based on a sample of 150 companies, and it is representative on the size category. The data collection was done by telephone using a questionnaire survey with the involvement of a market researcher company. I examined the market orientation of the companies based on the MKTOR scale, which I adapted to the examined companies, and found that the model is outdated, and it is needed of major transformations, and should be applied with reservations. I grouped the companies based on their market orientation. I crated four groups, they are the following: inward-looking, customer-oriented, competitor-oriented and market-oriented. After that, I focused on the connection between market orientation and corporate performance. In the corporate performance I examined three dimensions: effectiveness, relative advantage and consumer satisfaction. My results – related to results of previous research- confirmed the positive, significant relationship of both the holistic market orientation (HOPO) and the MKTOR scale with company performance. After summarizing the results of my research, I developed suggestions based

on my empirical results, which related to the improvement of adopted level of market orientation, as well as I defined future research opportunities and limitations of my results.

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Subject: PhD Publication List

Candidate: Bence Kovács
Doctoral School: Károly Ihrig Doctoral School of Management and Business
MTMT ID: 10055895

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24. Kiss, M., **Kovács, B.**, Szakály, Z., Kontor, E.: A védjegyekkel kapcsolatos fogyasztói attitűd és az életstílusjegyek kapcsolata. In: Magyar Táplálkozástudományi Társaság XLIII. Vándorgyűlése : Program füzet és az előadások összefoglalói. Szerk.: Biró Lajos, Gelencsér Éva, Lugasi Andrea, Rurik Imre, Magyar Táplálkozástudományi Társaság, Mezőkövesd, 32-32, 2018. ISBN: 97861556060609

Total IF of journals (all publications): 26,591
Total IF of journals (publications related to the dissertation): 3,7

The Candidate's publication data submitted to the iDEa Tudóstér have been validated by DEENK on the basis of the Journal Citation Report (Impact Factor) database.

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