

# Research Methodology in Marketing Publications in Turkey: Review and Evaluation

**Sema KURTULUS (PhD)**  
Faculty of Business Administration, Istanbul University  
Marketing Department Istanbul, Turkey

**Kemal KURTULUS (PhD)**  
Faculty of Economics and Administrative Sciences, Zirve University  
Business Department Gaziantep, Turkey

**Selen OZTURK**  
Faculty of Business Administration, Istanbul University  
Marketing Department Istanbul, Turkey

## ABSTRACT

The purpose of this study is to evaluate the marketing publications in Turkey based on their methodological issues and problems by using content analysis method. The main objective is to figure out and identify the basic problem areas in marketing publications from the methodological aspects in order to improve methodologies in marketing research. The evaluation of marketing publications is done in terms of methodological research process such as research type, research modeling, hypotheses development, sampling, measurement, data collection and data analyses.

The first study was conducted in 1995 and repeated for each year. This study provides insights and recommendations for the research methodology of marketing papers published in last five annual Turkish National Marketing Congresses' Proceedings until 2011. The main problem areas are related to modeling, hypotheses development, sampling and data analyses stages of research process. The results show that mostly popular analyses are preferred such as factor and regression analyses rather than considering suitability for research model and purpose.

**Keywords:** Marketing, Research Methodology, Marketing Publications, Turkish National Marketing Congresses, Content Analysis.

## 1. INTRODUCTION

The objective of this study is to review and evaluate the marketing publications to determine basic methodological problems in marketing research in terms of methodological framework in Turkey.

The discussion of research methodology used in marketing publications has been going on for last years [1] [2] [3]. The results of reviews and evaluations are different during this time of period. Mostly problem area is analyses, sometimes weak modeling.

For this study, 214 marketing papers published in last five annual Turkish National Marketing Congresses' Proceedings until 2011 which consisted of 12<sup>th</sup> [4], 13<sup>th</sup> [5] [6], 14<sup>th</sup> [7] and the 15<sup>th</sup> Turkish National Marketing Congresses [8] are examined to evaluate the publications and their research methodology. Content analysis is used as the research technique for understanding, determining and analyzing the development of the marketing discipline through evaluating these publications.

Kurtuluş and Dündar [1] evaluated 41 papers, Kurtuluş and Kurtuluş [3] evaluated 236 marketing publications by using similar methodological criteria, that is a basic research process in marketing area [9] such as content categories, research type, research modeling, research hypotheses, sampling, measurement, data collection and data analyses.

The main objective of this study is to analyze the marketing publications in Turkey according to their research type, modeling, hypotheses, sampling, measurement, data collection and analyses to find out basic methodological problems and how it's changed from years.

## 2. CONTENT CATEGORIES

There are 214 papers published for National Marketing Congresses's Proceedings between 2007 and 2011 examined. Their content categories can be broadly classified into consumer behavior, retailing, marketing management, tourism management, product and brand management, marketing strategies, international marketing, logistics management, marketing ethics, marketing communication, social marketing, services marketing, sales management and marketing research. The study indicates that consumer behavior, marketing management and retailing are the main categories of 214 marketing publications examined. One of the recent studies conducted in Turkey is also verified that consumer behavior is the most preferred subject for research by Turkish academicians [10]. Retailing was the fourth main area last year [11] although

it's third this year. The number of marketing publications by content categories is shown in Table 1.

**Table 1:** Number of Publications by Content Categories

Content Categories	Number	Frequency (%)
Consumer Behavior	73	34.1
Marketing Management	28	13.1
Retailing	23	10.7
Tourism Management	20	9.3
International Marketing	14	6.5
Marketing Communication	10	4.7
Services Marketing	8	3.7
Logistics Management	7	3.3
Marketing Research	7	3.3
Product and Brand Management	6	2.8
Marketing Strategies	6	2.8
Social Marketing	5	2.3
Marketing Ethics	4	1.9
Sales Management	3	1.4
<b>Total</b>	<b>214</b>	<b>100.0</b>

### 3. RESEARCH TYPE

Proceedings are coded according to their research type, whether the paper is theoretical or involves research; quantitative research or qualitative research or mixed.

Table 2 shows that the number of research based marketing publications is higher than the number of theory based ones, same as last year publications. In theoretical papers, there is no significant contribution to the existing literature, only the current literature analysis and adaptation is made. In addition, there is also some confusion in theoretical concepts translated from the foreign literature.

**Table 2:** Research versus Theory Based Papers

	Number	Frequency (%)
Research based	172	80.4
Theory based	42	19.6
<b>Total</b>	<b>214</b>	<b>100.0</b>

At the same time research based papers include both quantitative and qualitative research (see Table 3). Table 3 shows the research types namely quantitative research and qualitative research. Clearly, quantitative research dominates qualitative research in numbers. Although there is an increase in the number of qualitative research papers compared to previous years [1] [3] even last year [11], it is not adequate for marketing academia. Hanson and Grimmer [12] focused on analyzing the mix of qualitative and quantitative research published in major marketing journals from 1993 to 2002. It was found that overwhelming amount of research articles in marketing academia were quantitative similar to our study. This result can be interpreted that doing qualitative research seemed to be not preferred by most of marketing academicians. Personal preferences of researchers and not having required expertise related to qualitative research may be the reasons of this situation.

**Table 3:** Quantitative versus Qualitative Research

	Number	Frequency (%)
Quantitative Research	146	84.9
Qualitative Research	26	15.1
<b>Total</b>	<b>172</b>	<b>100.0</b>

### 4. RESEARCH MODELING AND HYPOTHESES

Out of 172 marketing publications examined, 46.5 % of those used descriptive-predictive model, 32.6 % used causal model and finally only 20.9 % used exploratory model. There is significant amount of improvement for exploratory and causal models when we compare last year results [11]. Research models used in these publications are presented in Table 4.

**Table 4:** Research Models

	Number	Frequency (%)
Exploratory Model	36	20.9
Descriptive - Predictive Model	80	46.5
Causal Model	56	32.6
<b>Total</b>	<b>172</b>	<b>100.0</b>

In some of the studies, there is no specific research design based on the research purposes, showing the variables sets and their relations. Approximately, 40.7 % of marketing publications has appropriate research designs although it is not sufficient yet. This result shows that there is a considerable increase in research design usage compared to the previous research results [1]. On the other hand 34.3 % of marketing publications did not use research designs. It is also observed that there is no design in about 25 % of papers which are mostly soft and exploratory researches.

**Table 5:** Specific Research Design Usage

	Number	Frequency (%)
Design used	70	40.7
No design used	59	34.3
No design used although must be used	43	25.0
<b>Total</b>	<b>172</b>	<b>100.0</b>

In 45.9 % of the studies, researchers have developed research hypotheses and tested these hypotheses. But, hypotheses are not formulated in some studies having descriptive-predictive and causal models. Unfortunately, in some studies hypotheses are developed incorrectly (null hypotheses versus alternative hypotheses) and these wrong hypotheses are also tested.

**Table 6:** Hypotheses Usage

	Number	Frequency (%)
Hypotheses developed	79	45.9
No hypotheses developed	70	40.7
No hypotheses developed but must be	23	13.4
<b>Total</b>	<b>172</b>	<b>100.0</b>

## 5. SAMPLING AND MEASUREMENT

Sampling is an important step in the research process because it is one of the indicators of the quality of inferences made by the researcher that stem from underlying findings [13]. Researchers must decide the number of participants for selection and how to select these sampling units in their studies. Thus, sampling process in these studies is evaluated in terms of sampling method and sample size.

**Table 7:** Sampling Methods

	Number	Frequency (%)
Convenience Sampling	155	91.7
Systematic Sampling	6	3.6
Cluster Sampling	3	1.8
Simple Random Sampling	2	1.2
Snowball Sampling	2	1.2
Judgmental Sampling	1	0.6
<b>Total</b>	169	100.0

Convenience sampling is the most widely used sampling method whereas systematic sampling, simple random sampling and cluster sampling are also used rarely in marketing publications. Besides, census is used in three of 172 research based studies instead of sampling. In the study of Kolbe and Burnett [14], a content analysis research, the majority of samples used are also classified as convenience samples. On the other hand, systematic sampling are found more frequently among other probability samples such as proportionate, simple random and stratified sampling in their study. Although snowball and judgmental sampling methods were not used in the past, only three studies have these sampling this year [11].

In these studies, mostly small samples are used in qualitative researches and large samples are used in quantitative researches. Indeed, there are times when it is appropriate to use small samples in quantitative research, while there are occasions when it is justified to use large samples in qualitative research [13].

**Table 8:** Sample Sizes

	Number	Frequency (%)
200 or less	62	36.0
201 - 400	54	31.4
401 - 600	32	18.6
601 - 800	10	5.8
801- 1000	8	4.7
1001 or more	6	3.5
<b>Total</b>	172	100.0

According to research findings, the sample sizes are not calculated in the majority of the marketing publications. The sample size is determined by researchers arbitrarily. In most of the publications, sample sizes are less than 200 respondents or between 201 - 400 and 401 - 600 respondents as shown in Table 8.

Measurement is important in accurately representing the concept of interest and is instrumental in the selection of the appropriate method of analysis. There are two types of scales

that are non-metric measurement scales and metric measurement scales. Nonmetric measurements can be made by nominal and ordinal scale whereas metric measurements can be made by interval and ratio scales [15]. Nominal scales are the simplest to use, and the ratio scales are the most complex [16].

Based on our study, the most widely used scale is the Likert Scale. Semantic differential is the other alternative attitude scale that is used in most of the marketing papers. According to Kumar [17], attitude scales will become more widely used in research as consumers become more educated and experienced in responding to marketing research questions.

## 6. DATA COLLECTION AND DATA ANALYSES

In terms of data collection, questionnaires are mostly used in quantitative researches whereas focus groups are mostly used in qualitative researches. In addition, the researchers preferred face-to-face interviews, scenario and simulation techniques in order to collect the data. As well as face to face interview, mail surveys and internet surveys have been frequently used as data collection instruments nowadays. Internet is a powerful tool for marketing researchers which offers many opportunities [18]. The purpose of data analyses is to obtain meaning from the collected data [19]. The important issue in data analyses is the determination of appropriate statistical procedure. Scale of measurement, the research design and the assumptions underlying the test statistic all affect the choice of a statistical method.

**Table 9:** Data Analyses

	Number	Frequency (%)
Factor Analysis	55	19.6
Reliability - Validity Tests	44	15.7
Regression Analysis	35	12.5
ANOVA - MANOVA	33	11.7
Chi-Square Test	26	9.3
Correlation Analysis	23	8.2
T test	23	8.2
Structural Equation Modeling	19	6.8
Discriminant Analysis	6	2.1
Content Analysis	6	2.1
Cluster Analysis	5	1.8
Kruskal-Wallis	2	0.7
AHP	2	0.7
Meta Analysis	1	0.4
Multidimensional Scaling	1	0.4
<b>Total</b>	281	100.0

The papers are evaluated in terms of the analyses' choice and their appropriate usage in our study. Number of analyses used in marketing publications can be seen in Table 9 above.

Table 9 shows that the number of factor analysis, reliability and validity tests, regression analysis, Anova, correlation analysis and chi-square test usage is higher among other analyses. In addition, the analyses such as t test, structural equation modeling is also taken an important share in data analyses. Cluster analysis, discriminant analysis, Kruskal-Wallis test,

AHP, Meta analysis and multidimensional scaling are also used by marketing researchers.

The results of in-depth content analysis indicate that in large number of studies, popular analyses are applied rather than appropriate ones. Reliability and validity tests, factor and regression analyses seemed to be popular patterns for Turkish marketing academicians. In some of the studies, the reliability of scales is lower than the generally agreed upon lower limit for Cronbach's Alpha, 70 % [15].

Another problem is related with inappropriate or insufficient statistical analyses usage. One of the examples of this wrong usage is using t test, testing the differences between the mean values of two groups, instead of Anova, testing the differences between the mean values of more than two groups [20]. Another example is not using non-parametric analyses where they are appropriate.

There are also some serious problems in using factor, regression and discriminant analyses such as improper naming of factors, problems in selecting the right method of regression analysis and in applying Morrison test in discriminant analysis.

## 7. CONCLUSION

In summary, there are some basic problems and weaknesses in marketing publications in Turkey despite a positive trend in the improvement of the methodology of latest publications compared to previous years.

Although there is an improvement, the problems mostly occurred in the modeling, hypotheses development, sampling and data analyses stages of research process. The results indicate that there are some weaknesses in the methodological process used by researchers in conducting qualitative research, developing research design and hypotheses.

Problems with sampling method selection also exist. Mostly, convenience sampling is chosen by researchers either because of time or budget constraints.

The findings demonstrate that attitude scales especially Likert scales are mostly preferred by researchers as it is expected. In terms of data collection methods, questionnaires are dominant among others.

It is interesting that all periods had some popular patterns of data analyses. However, it is suggested that data analyses must be selected in terms of research purposes, research design, scales of measurement and the assumptions underlying the test statistics.

It is important to note that the results of the current study are limited to the research processes of marketing publications reported. Although only the marketing papers published in last five annual Turkish Marketing Congresses' Proceedings are chosen as basis of this study, it is hoped that this study will provide a basis for further improvements in terms of research methodology in the field of marketing.

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