

Editorial

On the problems of statistical modeling in marketing and advertising research

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This issue is focused on the marketing and advertising research statistical modeling. Statistics in these areas has a long history of its applications – see a review of the year 1916 [1]. Of course, several papers cannot cover a broad range of various methods developed from that time to solve complicated problems of socio-economics nature of human activities in a market. But the selected works written by several recognized experts help to see some main directions of statistical thought in this field.

Dr. D. Kuznetsov considers so called “word-of-mouth” transferring impact that defines a marketing behavior, and uses a unique technique of stochastic partial differential equations developed in the mediaphysics. Drs. M. Prince and M.A. Davies’s paper is devoted to the classic problem of brand prestige and its solution in the latent class analysis. Dr. V. Ladyzhets describes special kinds of mortgages’ financial market and various modern techniques for their adequate modeling and forecasting. Dr. Ewa Nowakowska attacks the problem of the robust cluster analysis, which is important far beyond marketing research in any data segmentation and data mining areas. Dr. I. Mandel discusses methodological and philosophical aspects of statistical modeling, its place and role in a more general frame of the possible wider description of the socio-behavioral phenomena, and the specifics of solving market mix problems.

And last but not least, below are some quotations on mathematical and statistical modeling, most of which were taken from Shaw [2]:

“A theory has only the alternative of being right or wrong. A model has a third possibility: it may be right, but irrelevant”, – Manfred Eigen, *The Physicist’s Conception of Nature*, 1973, ed. Jagdish Mehra.

“The purpose of models is not to fit the data but to sharpen the question”, – Samuel Karlin, 11th R.A. Fisher memorial lecture, Royal Society, 1983.

“When evaluating a model, at least two broad standards are relevant. One is whether the model is consistent with the data. The other is whether the model is consistent with the ‘real world’”, – Kenneth A. Bollen, *Structural Equations with Latent Variables*, 1989.

“The sciences do not try to explain, they hardly even try to interpret, they mainly make models. By a model is meant a mathematical construct which, with the addition of certain verbal interpretations, describes observed phenomena. The justification of such a mathematical construct is solely and precisely that it is expected to work”, – John von Neumann.

“A theory is a good theory if it satisfies two requirements: it must accurately describe a large class of observations on the basis of a model that contains only a few arbitrary elements, and it must make definite predictions about the results of future observations”, – Stephen William Hawking, *A Brief History of Time*, 1988.

“Models are to be used, but not to be believed”, – Henri Theil, *Principles of Econometrics*, 1971.

“All models are right. . . Most are useless”, – T. Tarpey, *JSM*, 2009.

“No good model ever accounted for all the facts, since some data was bound to be misleading if not plain wrong”,
– James Dewey Watson, in Francis Crick ‘*What Mad Pursuit*’, 1988.

“Space and Time are the models in which we think, not the conditions in which we live”, – Albert Einstein.

“Do not quench your inspiration and your imagination; do not become the slave of your model”, – Vincent van Gogh.

References

- [1] H.L. Roth, The Application of Statistics to Advertising and Marketing, *Publications of the American Statistical Association* **15**(116) (December 1916), 436–465.
- [2] J.E.H. Shaw, Some Quotable Quotes for Statistics, available in the web, 2006.