

Business Data Analysis
SCH-MGMT 650

STATISTICS FOR MANAGERS USING Microsoft® Excel

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Timothy C. Krehbiel • Mark L. Berenson

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Professor Robert Nakosteen

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Statistics for Managers: Using Microsoft® Excel, Fifth Edition
by David M. Levine, David F. Stephan, Timothy C. Krehbiel, and Mark L. Berenson



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*To our wives,
Marilyn L., Mary N., Patti K., and Rhoda B.,
and to our children
Sharyn, Mark, Ed, Rudy, Rhonda, Kathy, and Lori*

ABOUT THE AUTHORS

The textbook authors meet to discuss statistics at Shea Stadium for a Mets v. Phillies game. Shown left to right, Mark Berenson, David Stephan, David Levine, Tim Krehbiel.



David M. Levine is Professor Emeritus of Statistics and Computer Information Systems at Bernard M. Baruch College (City University of New York). He received B.B.A. and M.B.A. degrees in Statistics from City College of New York and a Ph.D. degree from New York University in Industrial Engineering and Operations Research. He is nationally recognized as a leading innovator in statistics education and is the co-author of 14 books including such best selling statistics textbooks as *Statistics for Managers using Microsoft Excel*, *Basic Business Statistics: Concepts and Applications*, *Business Statistics: A First Course*, and *Applied Statistics for Engineers and Scientists using Microsoft Excel and Minitab*.

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Over the years, Berenson has received several awards for teaching and for innovative contributions to statistics education. In 2005 he was the first recipient of The Catherine A. Becker Service for Educational Excellence Award at Montclair State University.

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Szabat, Kathryn A. III. Statistics for managers using Microsoft Excel. IV. Title. 9 Chapter 1 Excel Guide 36 Excel Guide 10 EG1.1 Establishing the Variable Type 36 EG1. What Is Microsoft Excel? 10 EG1.2 Measurement Scales for Variables 37 EG2. How Can I Use Excel with This Book? 10 EG1.3 Collecting Data 36 EG3. What Excel Skills Does This Book Require? 10 EG1.4 Types of Sampling Methods 37 EG4. Getting Ready to Use Excel with This Book 12 EG1.5 Types of Survey Errors 37 EG5. Entering Data 13 EG6. Opening and Saving Workbooks 13 EG7. He is nationally recognized as a leading innovator in statistics education and is the co-author of 14 books, including such best-selling statistics textbooks as Statistics for Managers Using Microsoft Excel, Basic Business Statistics: Concepts and Applications, Business Statistics: A First Course, and Applied Statistics for Engineers and Scientists Using Microsoft Excel and Minitab. He was an Instructor/Lecturer of Computer Information Systems at Baruch College (City University of New York) for over 20 years and also served as an Assistant to the Provost and to the Dean of the School of Business & Public Administration for computing. Presentation on theme: "Statistics for Managers Using Microsoft Excel" Presentation transcript: 1 Statistics for Managers Using Microsoft Excel Fundamentals of Hypothesis Testing Chapter 7 Learning Objectives Describe the hypothesis testing process Distinguish the types of hypotheses Explain hypothesis testing errors Solve hypothesis testing problems One population mean One population proportion One & two-tailed tests As a result of this class, you will be able to... 73 One-Proportion Z Test Example The present packaging system produces 10% defective cereal boxes. Using a new system, a random sample of 200 boxes had 11 defects. Does the new system produce fewer defects? Test at the .05 level. $\bar{y} = 1/4$ $n \hat{p}$ \bar{y} , 3 5 $n \hat{p} \cdot (1 - \hat{p})$, 3 5 .