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Proposed Survey Of Business Statistics Teachers

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MSMESB 2002

MILO SCHIELD

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A Big Job!

300,000+ students per year

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227,000 undergraduates per year

~1,000 teachers (4 sections/yr; 50 students/section).

94,000 graduate students per year

~1,000 teachers (3 sections/yr; 33 students/section).

At \$1,000 per student, the total revenues are:

US Undergraduate: \$230 million per year.

US Graduate: \$100 million per year.

What Are Our Goals in Introductory Statistics?

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To teach business students:

- *the power & beauty of statistical inference.*
What percent teach confidence intervals?
What percent teach hypothesis testing?
- *the importance of statistical process control.*
What percent teach quality tools or control charts?
- *how to describe and model associations.*
What percent teach interpreting tables and graphs?
What percent teach multivariate/logistic regression?

What do Teachers Teach?

Stroup-Jordan Survey #1

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105 teachers of business statistics were asked:

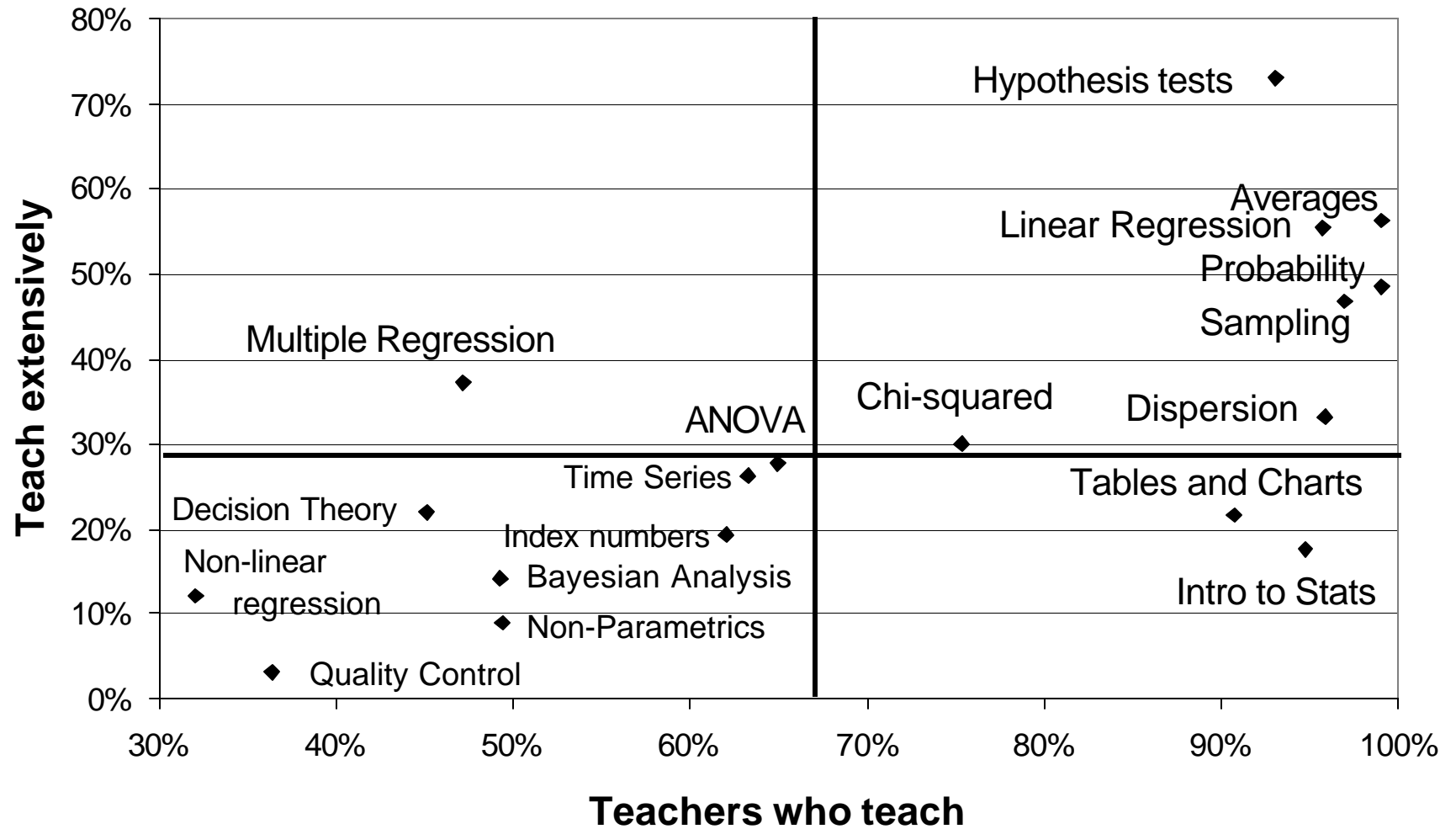
Q1. What topics do you teach?

Q2. If you teach a topic, do you teach it
moderately or extensively?

1982 ASA Proceedings of the Section on Statistical Education

“Statistics: Monster in the University”

Topics in Business Statistics



What do Managers Use?

Stroup-Jordan Survey #2

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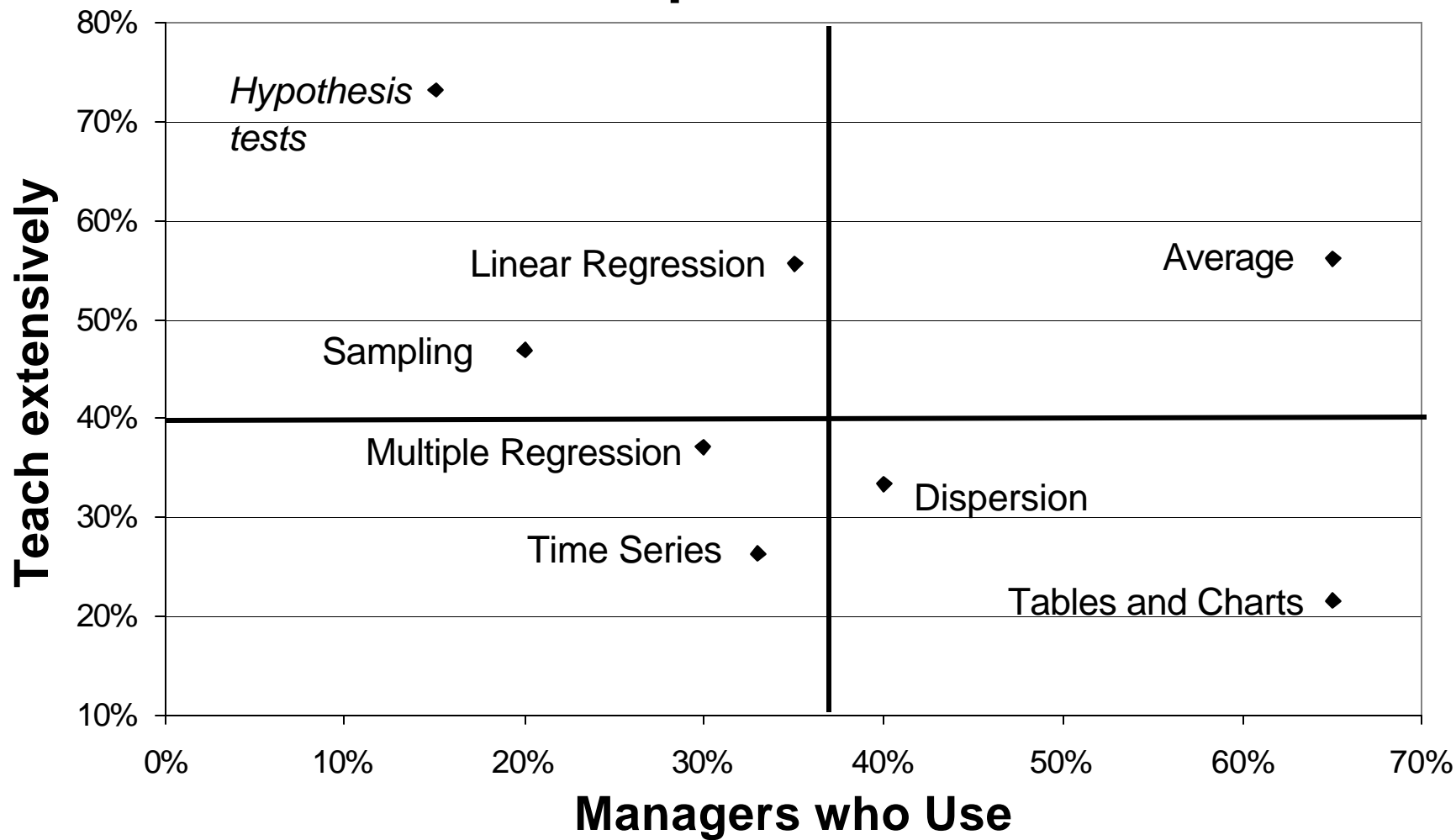
1,495 business managers were asked if they used various statistical topics in business.

High usage: graphs (83%), surveys (69%), and crosstabs/frequencies (65%)

Moderate usage: standard deviation (38%), regression (35%), time series (33%) and confidence intervals (30%)

Low usage: random sampling (20%) and non-parametrics (13%)

Statistics Topics in Business



Foreseeable THREAT to Business Statistics

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Topics taught extensively in business statistics are negatively correlated with business usage.

What would happen if the statistics requirement was expanded to include **any one** of these?

• Statistics	• Risk Management
• Management Science	• Cost Accounting
• Operations Research	• Market Research
• Business simulation	• Investment theory
• Actuarial science	• Project Management

The MSMESB Should Survey Business Statistics Teachers

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We have

- money for this survey.
- staff to compile a list of teachers.
- staff to mount/run web survey.

What is needed:

1. MSMESB authorization.
2. leadership.
3. participation.

MSMESB Survey of Business Statistics Teachers

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- What text is used? How many students taught?
- How are the topics and the text chosen?
- What is teacher education and experience?
- What topics are taught? How extensively?
- How relevant are these topics in business?
- What are the course goals?
- What changes are needed?
- What justifies statistics versus other courses?
- What is importance of modeling vs. inference?

Next Step on Proposed Survey

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Let me know if you are interested in:

- Survey coordination
- Generation of teacher contact list
- Survey design
- Survey field test
- Data preparation
- Data analysis

Benefits to MSMESB

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Externally:

- Be proactive in anticipating change
- Meet foreseeable “threat”
- Improve quality of statistical education
- Make “statistics more effective”

Internally:

- To serve 100% of business majors