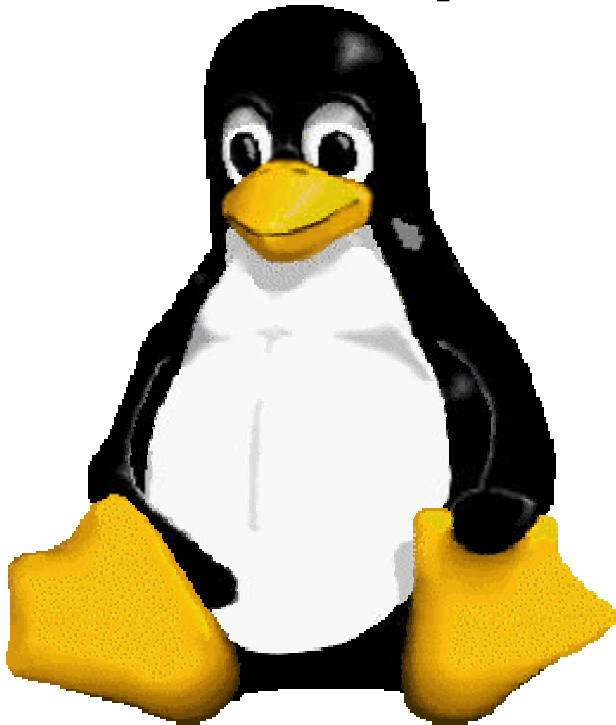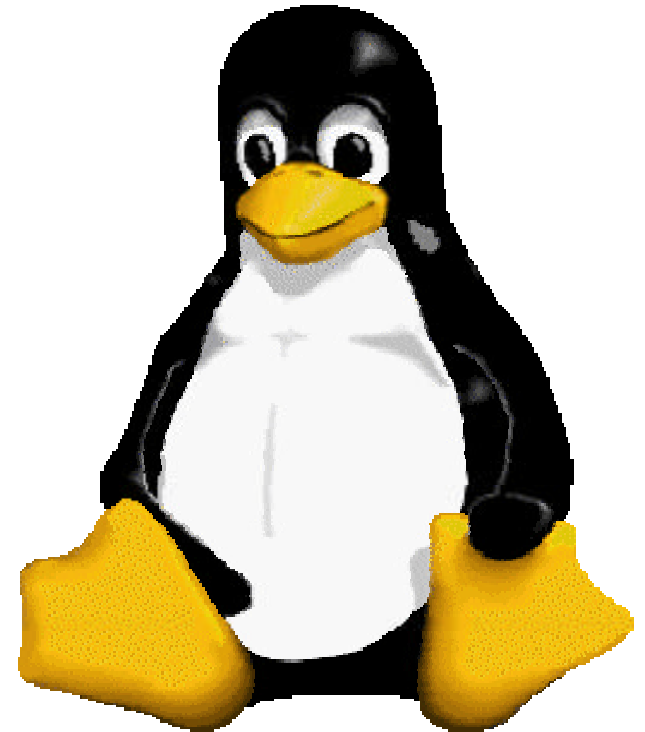# Is Corporate America Ready for Open Source Software?

Beth Foss

Dan McCreary

Vladan Pulec

Litao Zhang
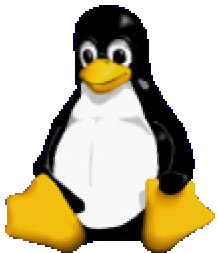
University of St. Thomas MBA Program

Dr. David Walonick

Agenda

- Origins of Open Source

- Background on Technology Adoption

- Using Statistics to Guild IT Strategies
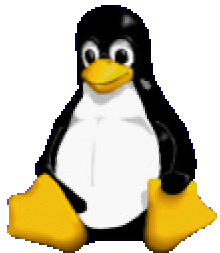
- Survey Design

- Responses

- Results

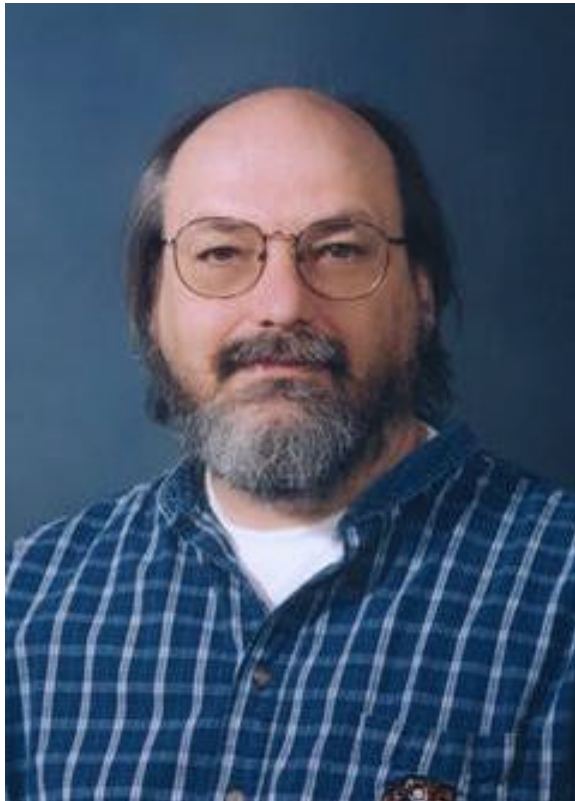# 1970…UNIX Was Free…
But with Strings Attached…

Ken Thompson   Dennis Ritchie
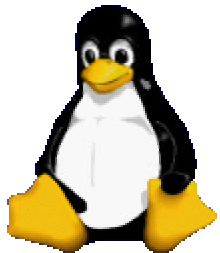
32 Years Later…Still Geeks

but the world of software has evolved….

Richard Stallman

- Frustrated that he could not freely use AT&T source code

- Started the GNU Project
  - **G**NU
  - Is **N**ot
  - **U**NIX

Philosophy of Open Source

- "Use the Force
  - Read the Source"
- Revenue from:
  - Installation
  - Customization
  - Training
  - Support

Linux

Linus Torvalds

- First popular truly Open Source operating system
- Manages all the critical resources of your computer
- Competes with Microsoft Windows
- 100% Free
- Open Source popularity rises
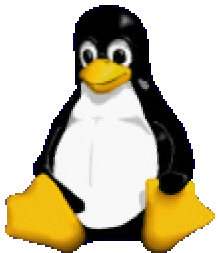
Stock Value of VA Software

Va Software Corporation
as of 18-Apr-2002

Technology Adoption

Geoffrey Moore

The Chasm

Innovators

Early Adopters

Early Majority

Late Majority

Laggards
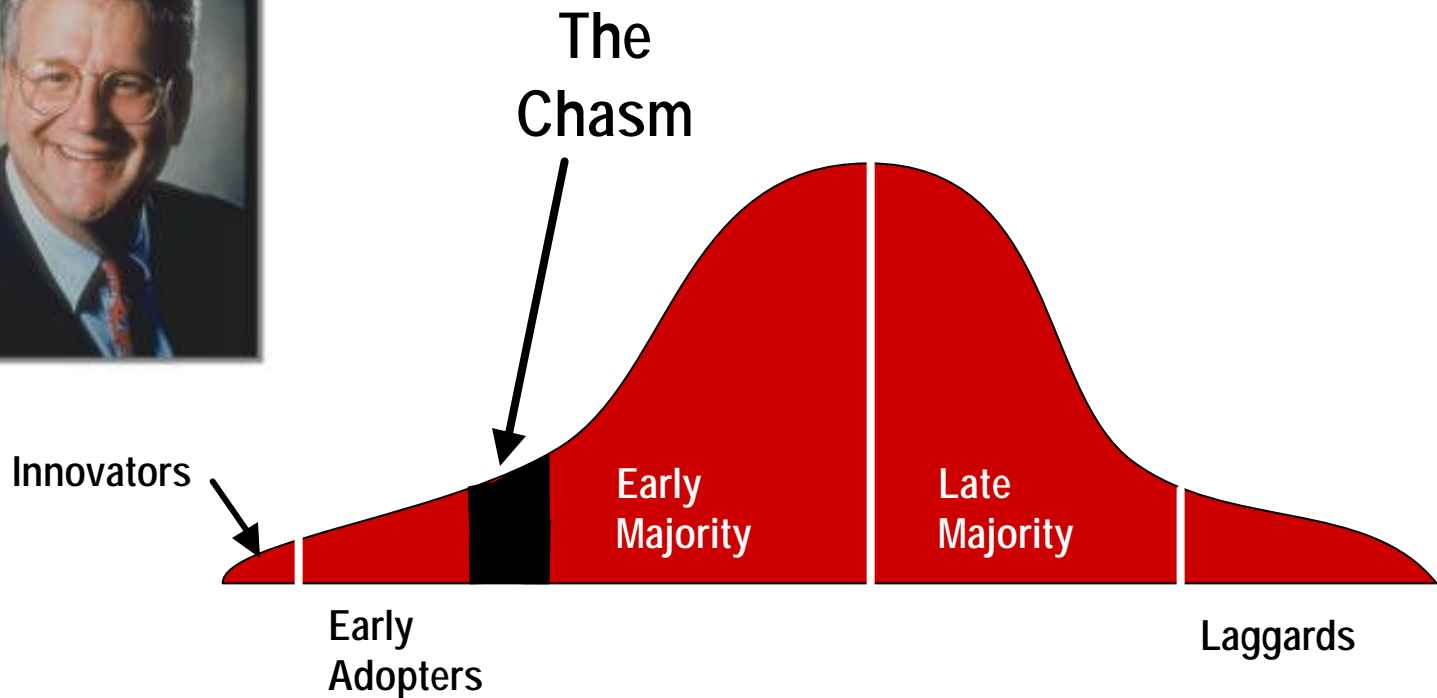
Technologies that fail to cross the chasm fail to reach critical mass.

FUD Factor

- FUD: Fear, Uncertainty and Doubt
- Old: "You never get fired for buying an IBM"
- New: "You never get fired for buying Microsoft"
- Question: Will you get fired for investing in Open Source?

Paul Strassmann

Profitability
(% Return on Shareholder Equity)

No Correlation

IT Spending as % of Revenue
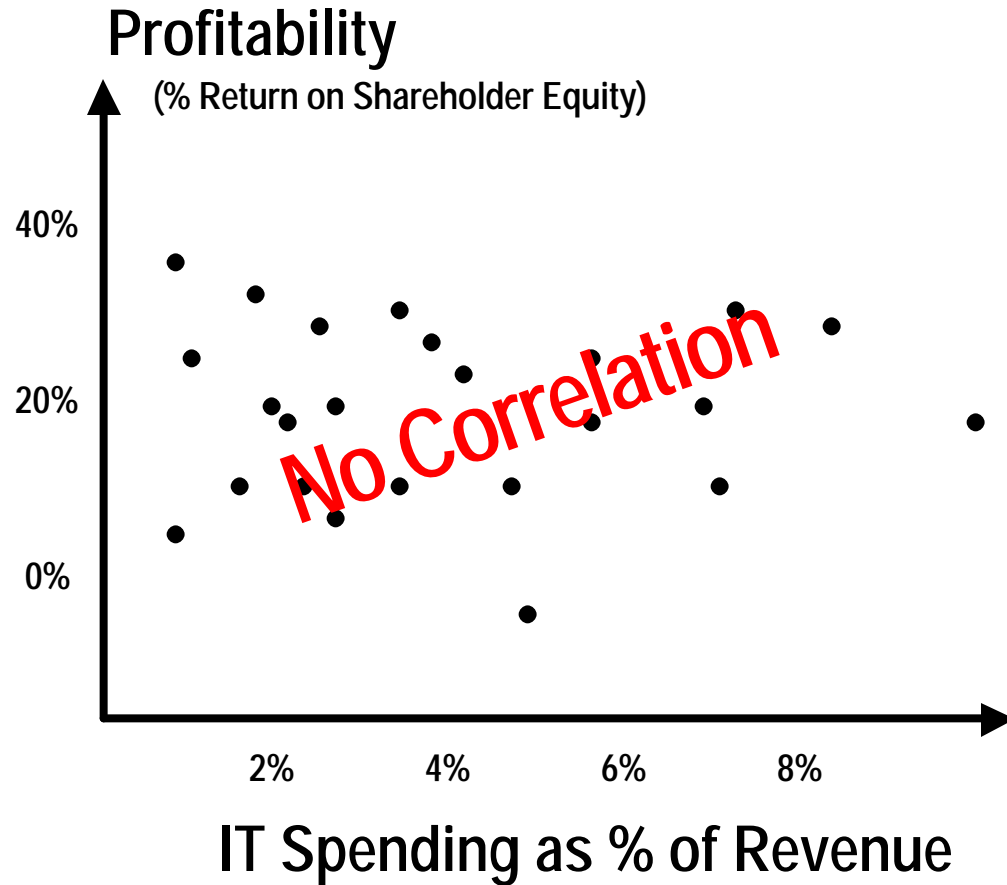
Net Profit and Productivity

Net Profit

Costs

Under-
achievers

Average

Over-
achievers

Management Productivity Focus
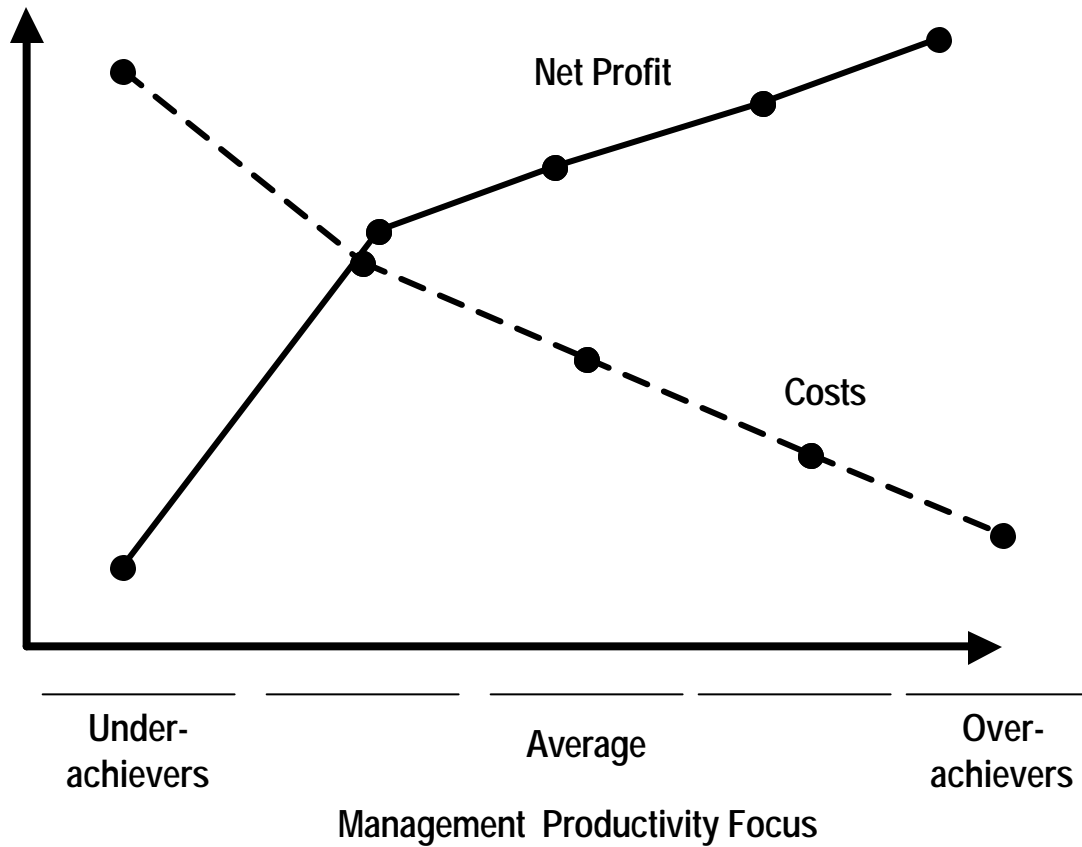
The Challenge
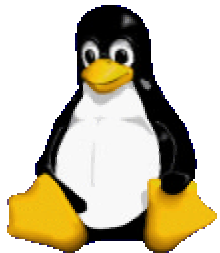
- A low percentage of IT professionals know their company profitability expressed as shareholder RIO and also know their their IT budgets as expressed as percentage of revenue

- Many would not be willing to share this data in a survey

Solution

- Focus on observations of attitude, peer attitudes and company willingness to try Open Source software.

- Ask IT professionals why they resist adopting a new technology.

Good News about Open Source

- Low evaluation cost
- Easy to "kick the tires"
- Easy to trace down problems (if you have the expertise)
- Low risk for non-critical systems

Early Days of Open Source
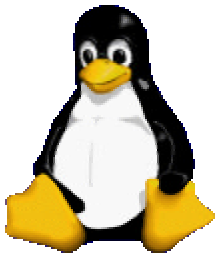
- Hard to install
- Poor documentation
- Lack of training and support
- Compatibility issues
- Many versions
- No single point of coordination

Resources

- Excellent Advisor
- Personal Contacts
- StatPac for Web Surveys
- StatPac for Analysis
- Student Time
- Budget Drivers
  - Convenience Sampling
  - Send e-mail requesting friends fill out a web survey
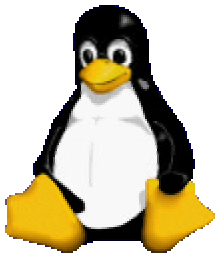
Approach

- What questions can you ask in a 2 minute survey?
- 13 questions
- Two questions on attitude
- Focus on key concerns using semantic differential scales – parametric data
- Company Size
- One Open-ended question

Key Concerns - Factors

- Security
- Value
- Reliability
- Documentation
- Ease of Use
- Support
- Training
- Installation

Open Source Survey

Dear IT Professional,

You have been selected to participate in a very important survey on the use of
    Open Source software for mission-critical applications. The sponsor of this
    study is the University of St. Thomas Graduate School of Business.

The survey will take less that two minutes. It is completely anonymous and your
    participation is voluntary.

http://www.statpac.com/host/Open_Source.htm

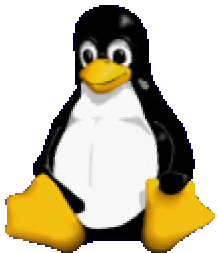The result of this research project will be posted at the following location the
    week of May 13, 2002.

http://www.statpac.com/statclass/OpenSource.htm
http://www.statpac.com/statclass/OpenSource.rtf
http://www.statpac.com/statclass/OpenSource.ppt

Sample
E-mail

Thank you for your participation.

Dan McCreary
Vladan Pulec
Litao Zhang
Beth Foss

Note: This survey is being conducted as part of a graduate course in statistics
    at the University of St. Thomas. The instructor for this class is David
    Walonick, Ph.D. If you have any questions about this research or if you would
    like any additional information, please contact Dr. Walonick at (612) 925-
    0159. You may also contact the University of St. Thomas Institutional review
    Board at (651) 962-5341.

IS CORPORATE AMERICA READY TO ADOPT OPEN SOURCE SOFTWARE?

Please complete this survey.

To what degree do you think corporate America is ready to consider Open Source software alternatives for mission-critical applications?

Not Ready   Ready

○   ○   ○   ○   ○

To what degree is your company ready to consider Open Source software alternatives for mission-critical applications.

Not Ready   Ready

○   ○   ○   ○   ○

How secure is Open Source Software?

Very Secure   Not Secure

○   ○   ○   ○   ○

How cost effective is Open Source Software?

Very Cost Effective   Not Cost Effective

○   ○   ○   ○   ○
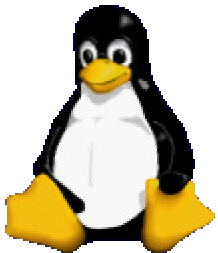
How reliable is Open Source software?

Very Reliable   Not Reliable

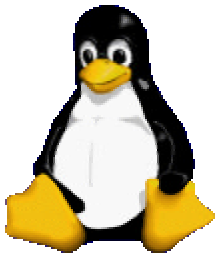○   ○   ○   ○   ○

Responses

- Surveys sent out to 112 people
- Spectrum of known Open Source evangelists and Microsoft fans
- Survey closed up after 6 days
- 77 respondents = 67% response rate
- 13 long, open-ended responses

Analysis

- Descriptive Analysis
  - Mean, median, standard deviation
  - Kurtosis
  - Kolmorgorov-Smirnov
- Frequency Analysis
- Stepwise Regression
- Factor Analysis
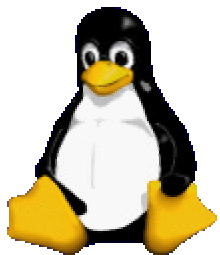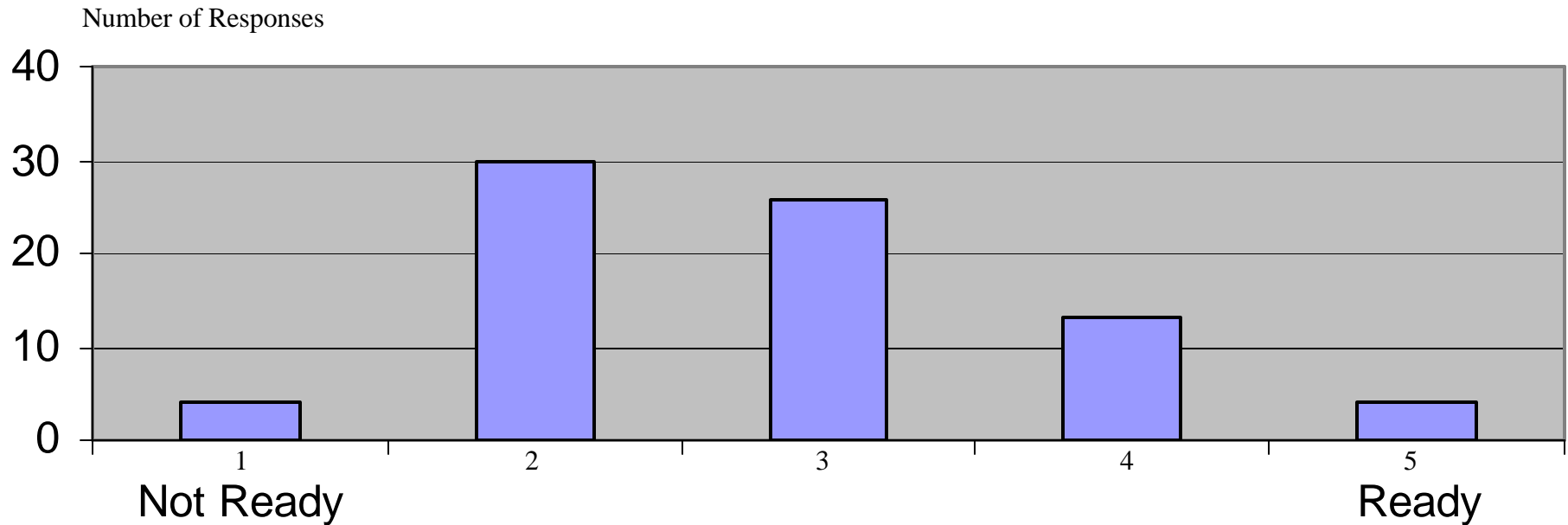- Open-ended question analysis
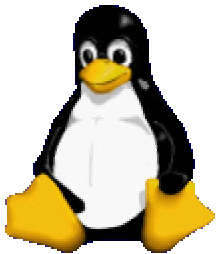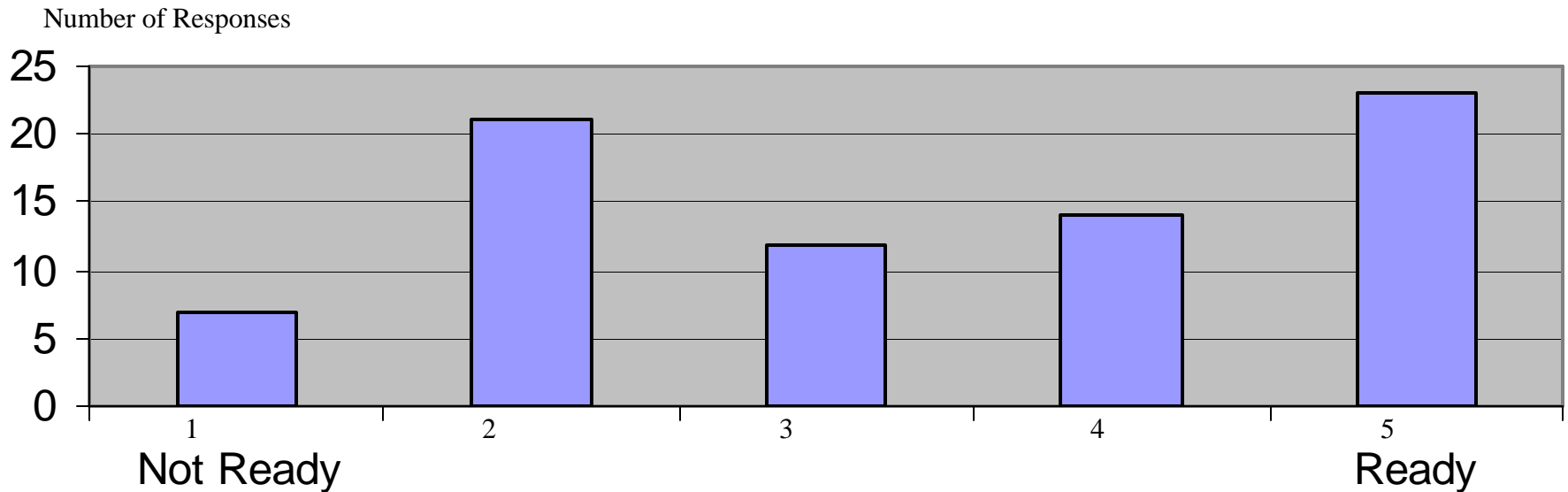
Results

Table 1 – Descriptive Statistics

Question	Mean	Median	Std. Dev
To what degree do you think corporate America is ready to consider Open Source software alternatives for mission-critical applications?	2.78	3	0.97
To what degree is your company ready to consider Open Source software alternatives for mission-critical applications.	3.32	3	1.39
How secure is Open Source Software?	2.51	2	1.02
How cost effective is Open Source Software?	1.9	2	0.84
How reliable is Open Source software?	2.18	2	0.84
How well documented is Open Source software?	2.82	3	1.05
How easy is it to use Open Source software?	2.64	2.5	0.87
How well supported is Open Source software?	2.77	3	1.02
How available is training for Open Source software?	3.22	3	0.83
How easy is it to install Open Source software?	2.68	3	0.93
How many employees work at your company?	7,777.43	36.5	39,651.4

To what degree do you think Corporate America is ready to consider Open Source software alternatives for mission-critical applications?

Number of Responses

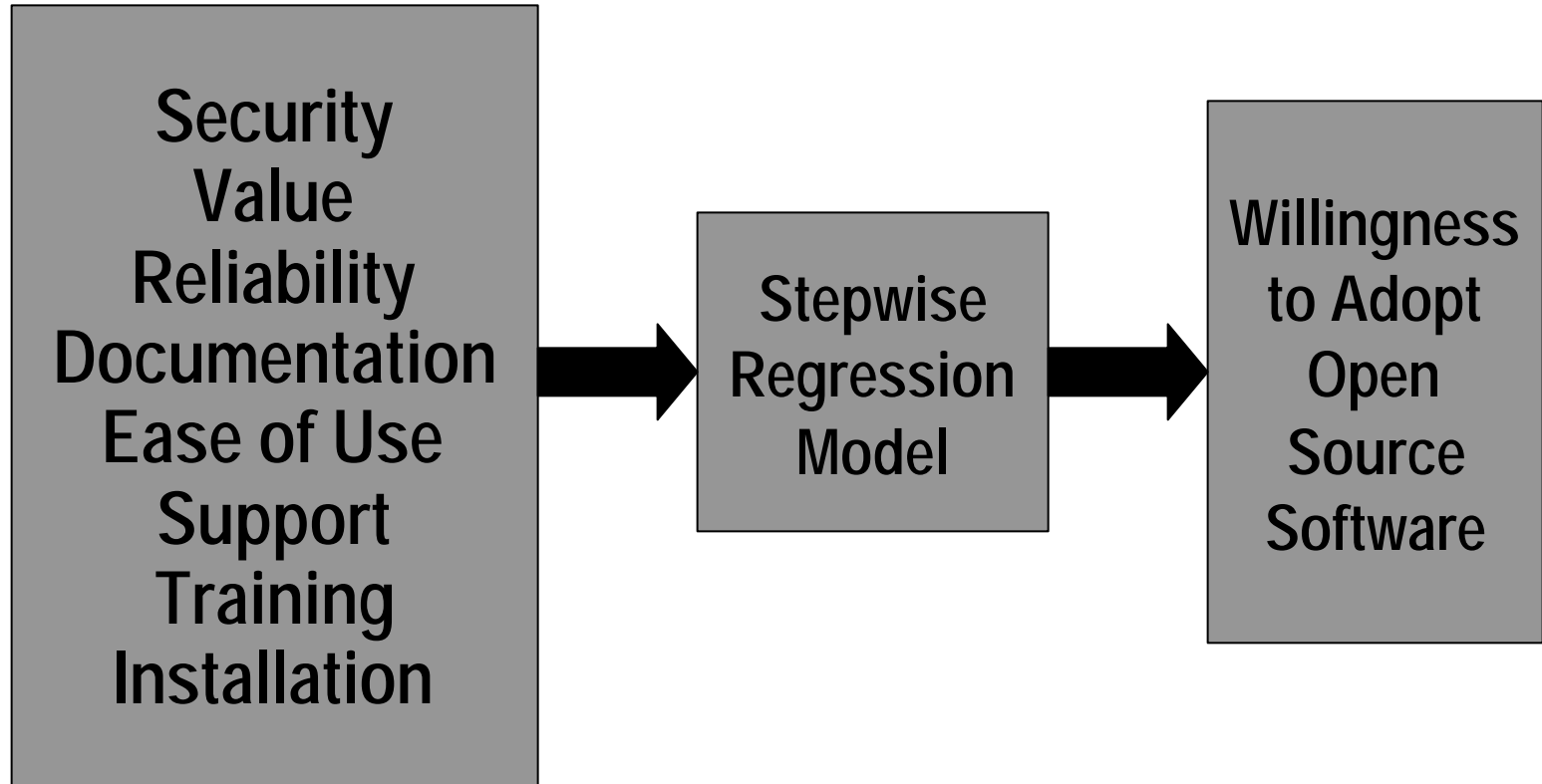|				
1	2	3	4	5
Not Ready				Ready

To what degree is your company ready to consider Open Source software alternatives for mission-critical applications?

Number of Responses

1	2	3	4	5
Not Ready				Ready

Can Factors Predict Willingness to Adopt Open Source?

Security
Value
Reliability
Documentation
Ease of Use
Support
Training
Installation

➡️

Stepwise Regression Model

➡️

Willingness to Adopt Open Source Software

Can Factors Predict Willingness to Adopt Open Source?

Security
Value
Reliability
Documentation
Ease of Use
Support
Training
Installation

→ 17% →

Willingness to Adopt Open Source Software