Transforms to improve fit and prediction (Power transformation on the regressor variables Box-Tidwell procedure)

ChengYu Huang Yi He JunJie Liu JiaChen Tu DaiChen Yao

United International College Statistics Year Three

November 26, 2018

Intro Motivation Model Data and Method Conclusion

OVERVIEW

- 1. Intro
 - Background
- 2. Motivation
- 3. Model
- 4. Data and Method
- 5. Conclusion

Intro

Intro Motivation Model Data and Method Conclusion

BULLET POINTS

- ▶ Most engineers are lazy ... and that is often a good thing
 - $lackbox{ } (lazy = to do things in the most efficient way)$
- ▶ Engineers are terrible story tellers ... they prefer content to form
- ▶ Readers are lazy ... need self contained and easy to read material
- ▶ LaTeX can help

MOTIVATION

NTRO MOTIVATION MODEL DATA AND METHOD CONCLUSION

Paragraphs of Text

Sed iaculis dapibus gravida. Morbi sed tortor erat, nec interdum arcu. Sed id lorem lectus. Quisque viverra augue id sem ornare non aliquam nibh tristique. Aenean in ligula nisl. Nulla sed tellus ipsum. Donec vestibulum ligula non lorem vulputate fermentum accumsan neque mollis.

Sed diam enim, sagittis nec condimentum sit amet, ullamcorper sit amet libero. Aliquam vel dui orci, a porta odio. Nullam id suscipit ipsum. Aenean lobortis commodo sem, ut commodo leo gravida vitae. Pellentesque vehicula ante iaculis arcu pretium rutrum eget sit amet purus. Integer ornare nulla quis neque ultrices lobortis. Vestibulum ultrices tincidunt libero, quis commodo erat ullamcorper id.

Model

tro Motivation Model Data and Method Conclusion

VERBATIM

EXAMPLE (THEOREM SLIDE CODE)

```
\begin{frame}
\frametitle{Theorem}
\begin{theorem}[Mass--energy equivalence]
$E = mc^2$
\end{theorem}
\end{frame}
```

TEX



Department of Decision Sciences and Managerial Economics The Chinese University of Hong Kong

- ► T_EX was created by Donald Knuth in 1978
- ► A typesetting macro language and compiler:
 - Readable mathematics
 - Better hyphenation
 - Optimized justification
 - ▶ Font management tools
 - Cross-compatibility
- ► Code Compile Visualize

Data and Method

INTRO MOTIVATION MODEL DATA AND METHOD CONCLUSION

FIGURE



FIGURE 1: CUHK Business School

TRO MOTIVATION MODEL DATA AND METHOD CONCLUSION

EDITORS AND COMPILERS

- ▶ To install in your machine
 - ▶ Check latex-project.org
- ▶ In the cloud
 - ▶ ShareLatex : www.sharelatex.com
 - ▶ Overleaf: www.overleaf.com

PLEASE GIVE ME MB OF SPACE ON OVERLEAF

https://www.overleaf.com/signup?ref=d1806010dac8

NTRO MOTIVATION MODEL DATA AND METHOD CONCLUSION

Multiple Columns

Heading

- 1. Statement
- 2. Explanation
- 3. Example

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Integer lectus nisl, ultricies in feugiat rutrum, porttitor sit amet augue. Aliquam ut tortor mauris. Sed volutpat ante purus, quis accumsan dolor.

CONCLUSION

NTRO MOTIVATION MODEL DATA AND METHOD CONCLUSION

TABLE AND EQUATION

Treatments	Response 1	Response 2
Treatment 1	0.0003262	0.562
Treatment 2	0.0015681	0.910
Treatment 3	0.0009271	0.296

Table 1: Table caption

$$\begin{bmatrix} a_{11} & \cdots & a_{1n} \\ \vdots & \ddots & \vdots \\ a_{n1} & \cdots & a_{nn} \end{bmatrix}^T = \begin{bmatrix} a_{11} & \cdots & a_{n1} \\ \vdots & \ddots & \vdots \\ a_{1n} & \cdots & a_{nn} \end{bmatrix}$$
(1)

TRO MOTIVATION MODEL DATA AND METHOD CONCLUSION

REFERENCES



John Smith (2012)

Title of the publication

 $Journal\ Name\ 12(3),\ 45-678.$

Transforms to improve fit and prediction (Power transformation on the regressor variables Box-Tidwell procedure)

ChengYu Huang Yi He JunJie Liu JiaChen Tu DaiChen Yao

United International College Statistics Year Three

November 26, 2018