

How to do the L^AT_EX Beamer?

Various page templates that may be required

Ernie Cheng-Xiang Zhuang one ¹ Ernie Cheng-Xiang Zhuang two ²

National Tsing Hua University

March 24, 2023

¹National Tsing Hua University one

²National Tsing Hua University two

Table of Contents

- 1 Sentence
- 2 Itemize and Enumerate
- 3 Math
- 4 Figure and Table
 - Figure
 - Table
- 5 Two columns
- 6 References



Sentence

Econometrics is a **statistical** method used to *estimate* the economic relationship, test economic theories, and evaluate the effects of government or business policies.

Pure mathematics is, in its way, the poetry of logical ideas.

— *Albert Einstein*

Sentence

Econometrics is a **statistical** method used to *estimate* the economic relationship, test economic theories, and evaluate the effects of government or business policies.

Pure mathematics is, in its way, the poetry of logical ideas.

— *Albert Einstein*

Itemize and Enumerate

- This is an item of ‘itemize’ package
 - This is an item in the ‘enumerate’ package
 - You can compare both:
 - ① The items in the ‘itemize’ package appear smaller in size
 - ② The items in the ‘enumerate’ package appear bigger in size
 - ③ In addition, you may observe that words appear smaller when they are positioned closer to the center.

Itemize and Enumerate

- This is an item of ‘itemize’ package
 - This is an item in the ‘enumerate’ package
 - You can compare both:
 - ① The items in the ‘itemize’ package appear smaller in size
 - ② The items in the ‘enumerate’ package appear bigger in size
 - ③ In addition, you may observe that words appear smaller when they are positioned closer to the center.

Itemize and Enumerate

- This is an item of ‘itemize’ package
 - This is an item in the ‘enumerate’ package
 - You can compare both:
 - ① The items in the ‘itemize’ package appear smaller in size
 - ② The items in the ‘enumerate’ package appear bigger in size
 - ③ In addition, you may observe that words appear smaller when they are positioned closer to the center.

Itemize and Enumerate

- This is an item of ‘itemize’ package
 - This is an item in the ‘enumerate’ package
 - You can compare both:
 - ① The items in the ‘itemize’ package appear smaller in size
 - ② The items in the ‘enumerate’ package appear bigger in size
 - ③ In addition, you may observe that words appear smaller when they are positioned closer to the center.

Itemize and Enumerate

- This is an item of ‘itemize’ package
 - This is an item in the ‘enumerate’ package
 - You can compare both:
 - ① The items in the ‘itemize’ package appear smaller in size
 - ② The items in the ‘enumerate’ package appear bigger in size
 - ③ In addition, you may observe that words appear smaller when they are positioned closer to the center.

Itemize and Enumerate

- This is an item of ‘itemize’ package
 - This is an item in the ‘enumerate’ package
 - You can compare both:
 - ① The items in the ‘itemize’ package appear smaller in size
 - ② The items in the ‘enumerate’ package appear bigger in size
 - ③ In addition, you may observe that words appear smaller when they are positioned closer to the center.

Math Block

Definition

Let $f(x)$ be a function defined on an interval that contains $x = c$, except that possibly at $x = c$. Then we say that, $\lim_{x \rightarrow c} f(x) = L$ if for every number $\epsilon > 0$ there is some number $\delta > 0$ such that $|f(x) - L| < \epsilon$ whenever $0 < |x - c| < \delta$

Definition

You can also use `\begin{definition}` and `\end{definition}` to write definitions, but it may be difficult to change the title formatting, such as making it appear in bold.

Math Block (Con't)

Proof.

You can add the command ‘`\hfill\blacksquare`’ in the end of your proof. ■

Proof.

You can also use `\begin{proof}` and `\end{proof}` to write your proof, it will automatically format a square at the lower right corner. □

Math Block (Con't)

Alert Block

You can modify the structure of the previous example to fit your needs.

Example

You can observe the differences for the three environments:

- ‘block’ appears in the color of LaTeX structure
- ‘alertblock’ appears in red
- ‘example’ appears in green

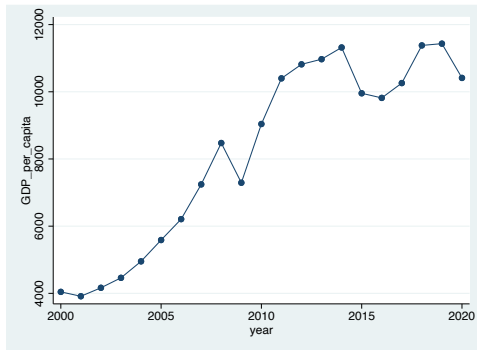
Mathematical Equations

$$\ln \left[\frac{\text{Prob. } (Y = b|X)}{\text{Prob. } (Y = 0|X)} \right] = \beta_0 + \sum_{j=1}^k \beta_{i,j} X_{i,j,b|Y=0} + \varepsilon_{i,b|Y=0} \quad (1)$$

$$(n-1)S^2 = \sum_{i=1}^n (x_i - \bar{X})^2 = \sum_{i=1}^n x_i^2 - n\bar{X}^2$$
$$\Rightarrow \sum_{i=1}^n x_i^2 = (n-1)S^2 + \underbrace{n\bar{X}^2}_{\text{Correct term}} \quad (2)$$

Figure

Insert a Figure



Sources: Worldbank

Figure 1: GDP per capita in Malaysia (current US\$)

Table

Insert a Table

Table 1: Statistical Differences in Student Loans Between Public and Private Universities in Taiwan (Academic Year 108)

	Public universities	Private universities
Loan amount	3,121,271,506	16,098,465,719
Number of students with loans	55,715	187,076
Total number of students	439,073	774,099
Loan amount per capita	56,022	86,053
The share of total student	12.69%	24.17%

Source: Department of Help Dreams

Note: You can write a note for the table.

Table

Insert a Table (Con't)

Table 2: The Best 5 Jobs

	2021	2019	2018	2017
1	Data Analyst	Data Analyst	Genetic Counselors	Statistician
2	Genetic Counselors	Statistician	Mathematician	Medical Services Manager
3	Statistician	University Professor	University Professor	Operations Research Analyst
4	Medical Services Manager	Occupational Therapy	Occupational Therapy	Information Security Analyst
5	Mathematician	Genetic Counselors	Statistician	Data Analyst

Source: CareerCast, from: <https://www.careercast.com>

Notes: 1. In 2020, CareerCast did not announce the best jobs of the year.

2. STEM-related occupations in bold.

Two columns (or Multiple columns)

- When we refer to previous figures, tables or equations in the text, we should cite them like this:
 - “figure `\ref{label}`”, then it will appear figure 1 and figure 2
 - “table `\ref{label}`”, then it will appear table 1 and table 2
 - “equation (`\ref{label}`)”, then it will appear equation (1) and equation (2)
- The advantage of citation is that when the slides are changed, there is no need to manually adjust the numbering all the time.



Source: Wiki

Figure 2: L^AT_EX

This is a no title page.

Hyperlink button: [▶ Link](#)



Citations

Commands for citations:

- ❶ textual citations: `\citet{label}`
- ❷ parenthetical citations: `\citep{label}`

For instance:

- ❶ K. Matsuyama (2022) and Marc J. Melitz (2003)
- ❷ (K. Matsuyama , 2022) and (Marc J. Melitz , 2003)

References

K. Matsuyama (2022). Non-CES Aggregators: A Guided Tour, *Annual Review of Economics*, 15, forthcoming.

Marc J. Melitz (2003). The Impact of Trade on Intra-Industry Reallocations and Aggregate Industry Productivity, *Econometrica* 71(6), 1695–1725.

The End

Questions? Comments?

