

# Sample L<sup>A</sup>T<sub>E</sub>X Document<sup>\*</sup>

Yuki Shiraito<sup>†</sup>

October 26, 2012

## **Abstract**

This document briefly describes how to write a paper using L<sup>A</sup>T<sub>E</sub>X. Sample commands for equations, tables, and figures will be provided.

---

<sup>\*</sup>Prepared for L<sup>A</sup>T<sub>E</sub>X Workshops sponsored by the Program for Quantitative and Analytical Political Science, Department of Politics, Princeton University

<sup>†</sup>Ph.D. candidate, Department of Politics, Princeton University, Princeton, NJ 08544-1012. Email: shiraito@princeton.edu

# 1 Text

To break a paragraph, insert a blank line.

Font styles: **Bold**, Roman, *italic*, SMALL CAPITAL, *slant*, **sanserif**, **typewriter** upright.

Quotations: “Right, as the world goes, is only in question between equals in power, while the strong do what they can and the weak suffer what they must.” (Thucydides, *The Melian Dialogue*) You can also use the “quotation” environment:

In such condition, there is no place for industry; because the fruit thereof is uncertain: and consequently no culture of the earth; no navigation, nor use of the commodities that may be imported by sea; no commodious building; no instruments of moving, and removing, such things as require much force; no knowledge of the face of the earth; no account of time; no arts; no letters; no society; and which is worst of all, continual fear, and danger of violent death; and the life of man, solitary, poor, nasty, brutish, and short. (Hobbes, *Leviathan*)

# 2 Mathematical Expressions

A strength of L<sup>A</sup>T<sub>E</sub>X is mathematical expressions. Here are some examples.

**Within texts** Mathematical expressions can be used within texts.

*Example:* UNIFORM CONTINUITY Let  $(X, d)$  and  $(Y, \rho)$  be two metric spaces, and  $f$  be a function from  $X$  to  $Y$ . Let  $A$  be a subset of  $X$ . Then,  $f$  is *uniformly continuous in  $A$*  if and only if for all  $x, x' \in A$  and for all  $\epsilon > 0$ , there exists  $\delta(\epsilon)$  independent of  $x, x'$  such that  $d(x, x') < \delta(\epsilon) \Rightarrow \rho(f(x), f(x')) < \epsilon$ .

**The “equation” and “align” environments** the “equation” environment is used for a single equation.

*Example:* TAYLOR’S THEOREM Let  $f$  be defined on  $(a, b)$ . Suppose the  $n^{th}$  derivative  $f^{(n)}$  exists

on  $(a, b)$ . Then for all  $x, x_0 \in (a, b)$  with  $x \neq x_0$  we can express

$$f(x) = f(x_0) + \sum_{k=1}^{n-1} \frac{f^{(k)}(x_0)}{k!} (x - x_0)^k + R_n(x, x_0). \quad (1)$$

The “align” environment is used for multiple equations.

*Example:* LEBESGUE’S DOMINATED CONVERGENCE THEOREM Let  $g, f_1, f_2, \dots$  be measurable such that  $\int |g|d\mu < \infty, |f_n| \geq g$  almost everywhere for all  $n$ , and  $f_n \rightarrow f$  almost everywhere. Then,

$$\int |f|d\mu \geq \int |g|d\mu, \quad (2)$$

$$\lim_{n \rightarrow \infty} \int f_n d\mu = \int f d\mu, \text{ and} \quad (3)$$

$$\int |f - f_n|d\mu \rightarrow 0 \text{ for } n \rightarrow \infty. \quad (4)$$

### 3 Figure

### 4 Table

### 5 Label

Once you create labels for sections, figures, and tables, you can refer to them by “ref” command.

*Examples:* Table 1, Figure 1, Section 2.

Equations can also be referred to. *Examples:* Equation (2)

## 6 Citation

Bibtex makes it far easier to make citations and references.

1. Prepare the bibliography database (.bib) file.
2. Cite papers by using “citet” or “citep” commands. *Example:* Scott (1976), (Dempster, Laird and Rubin 1977).

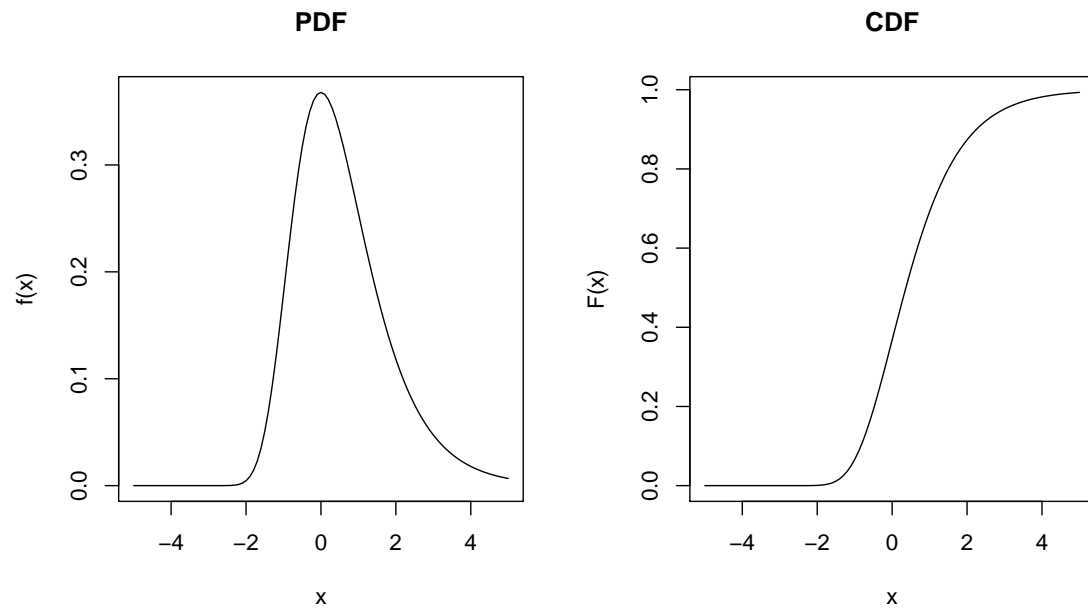


Figure 1: The Density and Distribution Functions of Type I Extreme Value Distribution

3. Run pdflatex.
4. Run bibtex.
5. Run pdflatex twice.

## References

- Dempster, A. P., N. M. Laird and D. B. Rubin. 1977. “Maximum Likelihood from Incomplete Data via the EM Algorithm.” *Journal of the Royal Statistical Society. Series B (Methodological)* 39(1):1–38.
- Scott, James C. 1976. *The Moral Economy of the Peasant: Rebellion and Subsistence in Southeast Asia*. New Haven: Yale University Press.

	Districts		Villages		Individuals		Violent events initiated by	
Provinces	total	sample	total	sample	total	sample	Taliban	ISAF
Helmand	13	5	1,578	61	1,411,506	855	11,806	2,074
Khost	13	5	880	45	754,262	630	779	257
Kunar	15	5	818	30	548,199	396	1,015	166
Logar	7	3	641	40	384,417	486	681	137
Urozgan	5	3	514	28	324,100	387	849	314
Total	53	21	4,431	204	3,422,484	2,754	15,130	2,948
8 non-sampled Pashtun provinces	112	0	10,383	0	6,156,571	0	10,007	2,135
Other 21 provinces	21	233	0	20,786	0	14,903,729	0	3,829
							1,225	

Table 1: Multistage Sampling Design Overview: First, five provinces shown in this table were randomly sampled from a total of 13 provinces with a Pashtun majority. Second, districts were randomly chosen within these districts. Third, villages were then randomly sampled from within selected districts. Fourth, households were randomly selected within each of the selected villages. Finally, one male respondent 16 years or older was randomly sampled within each of the selected households. The table also displays the number of Taliban- and ISAF-initiated violent events during one year prior to the survey (from 18 January 2010 to 17 January 2011) inflicted at the provincial level.

Table 2: Pooled Regression vs. Fixed Effects: Typical Models from the Literature

Dependent Variable: Polity	(1)	(2)
	Pooled 5 Year Panels	FE 5 Year Panels
Total Oil Income	-1.477 (0.344)	0.274 (0.219)
Initial Polity	0.272 (0.0453)	
GDP	6.379 (1.754)	3.126 (3.935)
Civil War	1.921 (3.118)	2.782 (2.979)
Region Dem Diffusion	0.562 (0.0578)	0.391 (0.0717)
<i>N</i>	2020	2020

Standard errors in parentheses