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**Guidelines for Constructing Tables and Figures**

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This document summarizes the guidelines for constructing professional tables and figures. See *The Chicago Manual of Style* for details.

### 1. Purpose of Table and Figure

Table and figure are to provide summary information to audience in a succinct manner. “A table offers an excellent means of presenting a large number of individual, similar facts so that they are easy to scan and compare” (p. 13.1). A badly built table or figure often makes audience confused and mislead. Please remove such ill-organized tables.

### 2. Determine Information to Convey

First, evaluate the need and value of a table (figure) by asking, “Is this table really necessary?” or “Can I convey the same information in a sentence (text)?” Do not try to construct a table to convey quite simple and clear information (e.g., 10 percent of the total 40 thousand population).

If a table is really needed, organize contents of the table efficiently and systematically. Concentrate on important information and skip unnecessary or redundant information. Compare Table 1 and 2 below; Notice that T and p-value are redundant and can be calculated from parameter estimates (coefficients) and their standard errors.

**Table 1. ...**

|                | Parameter estimates <sup>a</sup> |
|----------------|----------------------------------|
| Investment     | .0795*<br>(.0405)                |
| Inflation rate | ...                              |
| ...            | ...                              |
| Intercept      | ...                              |

Source: World Bank (2010)

Note: Standard errors in parentheses  
\* <.05, \*\* <.01, \*\*\* <.001

**Table 2. The Impact of Oil Shock on Growth ...**

|                | Parameter estimates | Standard errors | T    | P-value |
|----------------|---------------------|-----------------|------|---------|
| Investment     | .0795*              | .0405           | 1.96 | .053    |
| Inflation rate | ...                 | ...             | ...  | ...     |
| ...            | ...                 | ...             | ...  | ...     |
| Intercept      | ...                 | ...             | ...  | ...     |

Source: World Bank (2010)

\* <.05, \*\* <.01, \*\*\* <.001

Do not try to put too many things in a table. Discard less important information or separate into multiple tables.

### 3. Components of a Table

A table consists of table title, rules (border), column heads, row heads (stub), table body, and footnotes. A table title and heads are oftentimes sentence-capitalized. Use 12 point Times New Roman in the title and 10 point Times New Roman in other components except for figures in the table body (Use 10 point Courier New or other fixed-width fonts for figures).

- *Table title* should represent the content well.
- *Rules* should be plain horizontal lines without special styles.
- *Row and column heads* should be substantive (meaningful) and succinct.
- *Table body* should be in well-aligned plain text (fixed font) with consistency.
- *Footnotes* include source and notes

#### 4. Title of a Table

*A title should best describe the contents of a table or a figure; that is, a title should be informative enough to give key ideas to audience.* A title may be located at the top or bottom of a table (figure) depending on editing styles. Please spend enough time to determine appropriate titles.

Use a serial number and/or chapter number of a table (i.e., Table 1, Table 2, .... Figure 1, Figure 2, ..., Table 1.1, Table 1.2, ... Table 2.1, Table 2.2...).

A table title may contain *parenthetical information*, such as the unit of measurement (e.g., Million Dollars) and/or period (e.g., Year 2010) used in the table.

Compare the following examples; the second is a bad example.

- Table 4.3 The Impact of Oil Shock on Growth Domestic Product (Billion Dollars)
- [3] OLS Output for Oil Shock

#### 5. Row and Column Heads

A column head is the name of the column (variable), while a row head or stub (left-hand column) is the name of the row (observation). The first column (stub) rarely has a head.

Both heads need to be succinct enough and should be meaningful. For example, use a phrase rather than a sentence and use “%” instead of “percent.” Do not use variable names used in computer software (e.g., “inflation rate (log)” instead of “ln\_inf\_rate”).

A column head may have subheads and a stub may have sub-entries. A total or subtotal needs to be indented deeply to distinguish it from other entries.

|                        | USA    |        | Japan  |        |
|------------------------|--------|--------|--------|--------|
|                        | Import | Export | Import | Export |
| Information Technology |        |        |        |        |
| Hardware               | ...    | ...    | ...    | ...    |
| Software               | ...    | ...    | ...    | ...    |
| ...                    | ...    | ...    | ...    | ...    |
| Comm. Technology       |        |        |        |        |
| Wired phones           | ...    | ...    | ...    | ...    |
| Mobile phones          | ...    | ...    | ...    | ...    |
| ...                    | ...    | ...    | ...    | ...    |

When reporting the result of a regression analysis, Use “Standardized coefficients,” if needed, instead of “Beta” or “beta coefficients,” which is misleading. Use “P-value” instead of “Significance.”

### 6. Rules (Border Lines)

Use horizontal rules (lines) and minimize use of vertical lines (vertical rules may be used when the table could be really confusing without them). Do not use stylish lines, colors, and/or shading. Your thesis is not a fashion magazine. Take a look at the following bad tables.

| Variables      | Parameter estimates <sup>a</sup> |
|----------------|----------------------------------|
| Investment     | .0795*<br>(.0405)                |
| Inflation rate | ...                              |
| ...            | ...                              |
| Intercept      | ...                              |

| Variables      | Parameter estimates <sup>a</sup> |
|----------------|----------------------------------|
| Investment     | .0795*<br>(.0405)                |
| Inflation rate | ...                              |
| ...            | ...                              |
| Intercept      | ...                              |

| Variables      | Parameter estimates <sup>a</sup> |
|----------------|----------------------------------|
| Investment     | .0795*<br>(.0405)                |
| Inflation rate | ...                              |
| ...            | ...                              |
| Intercept      | ...                              |

### 7. Table Body (Contents)

Use 10 point *Times New Roman* for text and 10 point *Courier New* or *SAS Monospace* for numbers. Do not use too big or too small fonts. Do not use any color other than black or font effects such as **emboss** and **shadow**.

When reporting numbers, rescale or adjust them in order to avoid too small and too large numbers (e.g., “0.0000000004455” and “75,845,341,697,785”). Sometimes, you need to rescale data first when running analysis. Don’t forget to report the unit of measurement.

Align numbers consistently. Pay special attention to the location of the decimal point, the number of digits below the decimal point, and leading zeros of real numbers. Adjust the number of digits below the decimal point properly depending on the purpose of the table. See the following table (Compare figures of country A and B).

|                        | Country A |           | Country B |         |
|------------------------|-----------|-----------|-----------|---------|
|                        | Import    | Export    | Import    | Export  |
| Information Technology |           |           |           |         |
| Hardware               | .433      | 532.351   | 23.405    | 102.304 |
| System software        | 53.032    | 1,632.056 | 325.0323  | 0.32    |
| Application software   | .234      | 23.576    | 2362.1    | .663    |
| ...                    | ...       | ...       | ...       | ...     |

### 8. Table Footnotes

Table footnotes includes source of information, notes applying to the whole table, notes applying only to specific parts of the table, and statistical significance. Use 10 point Times New Roman.

- Provide data sources, if applicable, at the bottom of a table or figure. For instance, “Source: General Social Survey (2008).”
- Provide general notes for reading the table. For example, “Note: All figures in constant 2010 terms (100 Yen = USD 90.00).”
- Provide specific notes if needed for clarification. Use superscripts of the alphabet for numbering (e.g., <sup>a</sup>, <sup>b</sup>, <sup>c</sup>, ...). For example, “<sup>a</sup> The discrete change is the difference in predicted probabilities of two groups at the reference point.”
- Provide statistical significance, if needed. For example, “Significance: \* <.05, \*\*<.01, \*\*\*<.001” Do not use 5%, 1%, and so forth.

## 9. Figures

- A figure should be integrated and compact. Do not provide many individual figures that might be integrated into a figure.
- Adjust the size and scale of figures so that they are neither too big nor too small.
- Provide appropriate labels and grid on X and Y axes.
- Do not too many colors and shading. Such figure is loud and distracting.

## 10. Interpretation and Explanation

Interpret and explain tables and figures; do not let audience interpret them. Tables and figures themselves do not say anything to the audience. If you hate interpretation and explanation, do not use tables and/or figures!

## 11. Good Examples

You don’t need to strictly follow the formats below. Any format will do as long as it can present information (analysis results) concisely, efficiently, and effectively.

**Table 2.1 ...**

| Variables      | Parameter estimates |
|----------------|---------------------|
| Investment     | .1244*<br>(.0356)   |
| Inflation rate | ...                 |
| ...            | ...                 |
| Intercept      | ...                 |
| F test         | 4.7835*             |
| R <sup>2</sup> | .8754               |
| N              | ...                 |

Source: World Bank (2010)

Note: Standard errors in parentheses

\* <.05, \*\*<.01, \*\*\*<.001

**Table 2.2 The Impact of Oil Shock on Growth ...**

| Variables      | Parameter estimates | Standardized coefficient | Standard deviations |
|----------------|---------------------|--------------------------|---------------------|
| Investment     | .1244*<br>(.0356)   | ...                      | ...                 |
| Inflation rate | ...                 | ...                      | ...                 |
| ...            | ...                 | ...                      | ...                 |
| Intercept      | ...                 | ...                      | ...                 |
| F test         | 4.7835*             | ...                      | ...                 |
| R <sup>2</sup> | .8754               | ...                      | ...                 |
| N              | ...                 | ...                      | ...                 |

Source: World Bank (2010)

\* <.05, \*\*<.01, \*\*\*<.001

## 12. Bad Examples

Let us consider a bad table example below.

- Inappropriate table number and title

- Stub: variable names were used.
- Column 2 and 5 have badly aligned numbers. See the number of digits below the decimal point.
- Column 3 and 4 use color and shading.
- Column 5 uses different fonts, font effect, and sizes.
- Table border and lines: too stylish and distracting. Vertical rules were misused.
- Source and note: no source and improper note (i.e., .01 level instead of 1 %)

**<0001> OLS Output of Oil Shock (Final Result)**

| Variables   | Coefficients | T statistics | Beta        | P-value      |
|-------------|--------------|--------------|-------------|--------------|
| Intercept   | 87.253       | .1243**      | .64         | .352         |
| sqrt_invest | 0.12         | .8463 ***    | 0.47263 *** | <b>.422</b>  |
| ln_inf_rate | .235342      | .7465*       | .3343       | <b>0.857</b> |
| ...         |              |              |             |              |
| N           |              |              |             |              |

\*, \*\*, and \*\*\* indicate statistical significance at 10%, 5%, and 1%, respectively.  
N stands for the number of observations.

End of this document.