Using Figures to Support Your Point

Keep in mind the fact that figures do not exist for themselves, they exist only as support for a point. While figures can be very helpful in supporting a claim, they can also be meaningless, or can distract the reader from the claim that they are intended to support if they are not presented well. In addition, they can make your essay very burdensome reading.

Too many figures reads like a textualized table or chart. People like to read ideas, not figures; they want interpretation and discussion (i.e., development) of facts, not just facts. Your teacher has told you over and over to provide concrete support. But you'll also agree that so many figures make for boring reading.

Common problems

- Meaningless figures: In many contexts, a figure is meaningless if it is not grounded in a comparison or a time frame. For example, in "The report showed that the 434 listed firms spent a total of 7.33 trillion won ($6.01 billion) on research and development in 2002," the figure 7.33 trillion won is almost meaningless. The reader wants to know what the sums for previous years were, in order to know whether the sum is increasing or decreasing; the reader should know what percentage of revenue or profits or spending that the sum represents; and the reader should know what a like number of similar-sized firms in other countries invested in research and development. Figures that aren't grounded in comparison are usually very weak support.

- Covering up the truth: In addition to being meaningless, ungrounded figures sometimes hide the truth. In order to persuade the reader that there was a large increase, the writer might say, for example, that divorce in Korea has grown 6 percent. That may sound like a lot, but if the increase happened over 20 years it is not a substantial increase.

- Too many figures in the essay: How about presenting them in a table or chart? Discussion of the figures can be presented in the paragraph, and you can refer to the table. ("Please refer to Table 1.")

- Figure strings: Presenting more than two figures in a row pulls the reader down into them and makes it difficult for him to keep the point in mind. One way to support your claim in such a situation is to present only the chronologically first and last figures and eliminate the figures in between.

- Hiding the point with decimals: Very specific figures have another potential problem: they often distract the reader from the point and hinder understanding. Which of the following figures is easier to understand in reading: 41.8%, almost 42%, over 40%? "Over 40%" is easiest. If the exact decimal number isn't really essential, round off the figure (and use "almost" or "just under" or "just above").

- Amounts by themselves often tell us less than percentages do; often, it's the degree of increase or decrease that's meaningful, not the amounts themselves. What is more effective in expressing the idea of a large increase: "from 26 to 78" or "300 percent"? The reader, in order to see the increase of 300 percent would have to stop reading and calculate; if he isn't willing to stop reading, he won't fully appreciate the steep increase from 26 to 78..

- "Padding": Figures are sometimes used as filler, to make an essay or an article longer, when the writer doesn't have substantial content ("10.6 percent in Chile, 4.3 percent in Peru, 6.8 percent in China, 19.7 percent in Korea"). Some writers present many figures to prove to the reader that they have researched diligently and thoroughly; some writers think that more figures provide for stronger credibility. Avoid presenting many figures which are not useful and could be replaced by more useful discussion, such as answers to questions that the reader might have.

- Vocabulary: Don't confuse "number" and "percentage" and "rate" and "ratio." Each of these words has its own usage. For example, we don't say "the ratio was 23%."

Can you make these details more readable?

1. This writer's figures are supposed to support his claim that women's situation is improving: "According to the Korean National Statistical Office, the ratio of the women's participation on the economic activities went up from 42.3 percent in 1980 to 48.8 percent in 2001."

2. "Satellite cities aren't playing proper role in Korea because they are bed towns for Seoul. Satellite cities exist only as bed towns for increasing population in Metropolitan area. From the late of 1980, many people moved to the satellite cities and they grew rapidly. But now, in the five satellite cities—Bundang, Ilsan, Pyungchon, Sanbong, Jungdong—2,308,262 persons go to the office to Seoul and they form 37.7 percent of the total. In terms of the rate of company employees who commute to Seoul everyday, Bundang ranks the highest with 50.3 percent. The following rankings are like that: Ilsan (46.1%), Pyungchon (35.3%), Sanbong (29.1%), Jungdong (25.6%)."

Suggestions for "Can you make these details more readable?"

1. "According to the Korean National Statistics Office, women's economic activity increased over 6 percent in 20 years."
2. "...But now, in the five satellite cities—Bundang, Ilsan, Pyungchon, Sanbong, Jungdong—over 2 million people commute to Seoul, forming over two-thirds of the total workers in Seoul. The number of company employees who commute to Seoul everyday ranges from half of Bundang's population to a quarter of Jungdong's.

One more example of misused numbers and abused readers

In this article from the Korea Herald, we see very specific numbers, some of which are not useful, some of which distract the reader from the point, some of which exhaust the reader. Read the entire article once, then find figures in it which could be more effectively presented in order to give the reader deeper understanding of the situation. Then compare your ideas with Mr. MacStein's, below the article.

Up to 20% of local firms fail to invest in R&D

As many as 20 percent of listed firms in Korea spent not a single dollar in R&D activities last year, a report from the Korea Stock Exchange (KSE) showed yesterday.

According to the KSE's poll of 433 listed companies closing accounting books every December, Korean firms' R&D expenditure fell short of spending by their U.S. and Japanese counterparts.

The report showed that the 434 listed firms spent a total of 7.33 trillion won ($6.01 billion) on R&D in 2002, compared with 6.48 trillion won and 6.72 trillion won, respectively, recorded in 2000 and 2001.

The portion of R&D spending against turnover edged up 0.02 percentage point to 1.75 percent last year. However, the share was lower compared to the U.S.'s 4 percent and Japan's 3.9 percent.

"What is notable is that about 20 percent of the surveyed firms failed to spend any money on developing new products," said an economist at the KSE.

By company, Samsung Electronics spent 2.94 trillion won on R&D last year, followed by Hyundai Motor with 555 billion won, Hynix Semiconductor Inc. with 405 billion won, Kia Motors with 373 billion won, and SK Telecom with 269 billion won.

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Mr. MacStein's ideas

- In the third paragraph ("The report showed. . ."), rather than the amounts, give percentages.
- In the fourth paragraph, change "edged up 0.02 percentage point" to "a fraction of a percent."
- In the last paragraph: Amount figures are meaningless if we can't compare them with (or ground them in) a company's total spending. Even if we also know the company's total spending, if we are given only amounts we have to take the extra step of calculating a meaningful percentage. Why not just give the percentage? (If the amounts are considered necessary, present them in a table or chart.)
- In general: Several of the figures could be replaced by more useful discussion—such as answers to questions that the reader would have (the most obvious of which is probably, "Why aren't these companies investing in R&D?").