

Milestone: Timekeeping: Homework 7

Due: 15 November 2021

1 Standardized time around the world

The International Meridian Conference of 1884 recommended the use of time zones based on the Greenwich meridian and Greenwich Mean Times.

- a) Which countries already used standard time based on this system in 1884?
- b) Did all countries that existed at the time adopt this system within 20 years? Give examples to illustrate your answer.

Most countries use standard time that is offset (differs) by a whole number of hours from Greenwich Mean Time. There are some which are offset by half and quarter hours. The technical term for this system of time is Coordinated Universal Time (UTC) and the particular time offsets are called UTC time offsets. Information about this can be found on Wikipedia.

- c) List two or three countries whose time offset is not a whole number.
- d) Search Wikipedia or another source for historical time offsets that are not a whole number of hours, half hours or quarter hours. Describe one of these.

2 Worldwide time zones

Suppose that you want to listen to a presentation that is presented live in another country and is also broadcast by Zoom. The presentation starts on the hour according to the time in that country. The presentation is also close to the time that everyone in your own household needs to leave in the morning. This means that your household is very busy and you would need to pay close attention to the time so that you do not miss the start of the presentation.

- a) How does the system of worldwide standardized time zones assist you in being able to watch the start of the presentation?
- b) If the country adhered to the local time of their capital how might this complicate your efforts to watch the start of the presentation?

3 The portable watch industry

The early history of the portable watch industry is described in:

- D. S. Landes, *Watchmaking: A Case Study in Enterprise and Change*, The Business History Review, Vol. 53, No. 1, pp. 1–39 (1979).

- a) Portable watches were originally developed in the late 17th century and an industry for manufacturing these appeared in the 1700s. England came to dominate watchmaking in the 1700s. Describe a few characteristics of the industry in this country, identified in the article by Landes, that allowed this country to monopolize watch production.
- b) Briefly describe the nature of the watchmaking industry in England in the 1700s. For example, did a single person make the entire watch?
- c) Which European country competed with England for watchmaking in the 1800s? Briefly describe how they succeeded and whether the English watchmaking trade successfully countered this competition.
- d) Which company or companies in the United States pioneered the mass production of portable watches? Briefly describe what the innovations that allowed them to mass manufacture portable watches cheaply. Briefly describe how this affected the Swiss watch trade.

4 Demand for portable watches

Information and data about the portable watch industry is described in:

- D. S. Landes, *Watchmaking: A Case Study in Enterprise and Change*, *The Business History Review*, Vol. 53, No. 1, pp. 1–39 (1979).

Briefly describe some of the reasons for the increased demand in portable watches in the late 19th century. Describe how this is reflected in the actual output of watches.