

- **Zysman, John. “Manufacturing in a Digital Era: Strategic Asset or Vulnerable Commodity?”**
New Directions in Manufacturing: Report of a Workshop. The National Academies Press,
Chapter 22, pages 116-129, 2004.

In a digital era, companies and countries must determine whether manufacturing capacity is a strategic asset or a vulnerable commodity. For companies, the relevant issues are: When does production serve to generate and maintain advantage? Under what circumstances is a lack of in-house world-class manufacturing skills a strategic vulnerability? When is it simpler and easier to buy production as a commodity service? For a country or region, the relevant issue is: What can be done to make this country/region an attractive location for world-class manufacturing, that is, an attractive place for companies to use production in order to create strategic advantage?

This paper develops three arguments. First, the argument about product in a digital age is set in the context of the argument that a service economy will follow on a manufacturing economy. The author demonstrates there is in fact an evolution and reorganization of production hidden within the statistics. Second, the emergence of the digital era is put into a historical context. Third, the place of production in value creation and market position is considered for three different types of sectors.