

Computer and Peripheral Equipment Manufacturing

Example Economic Brief

ECO100: Principles of Economics

Strayer University

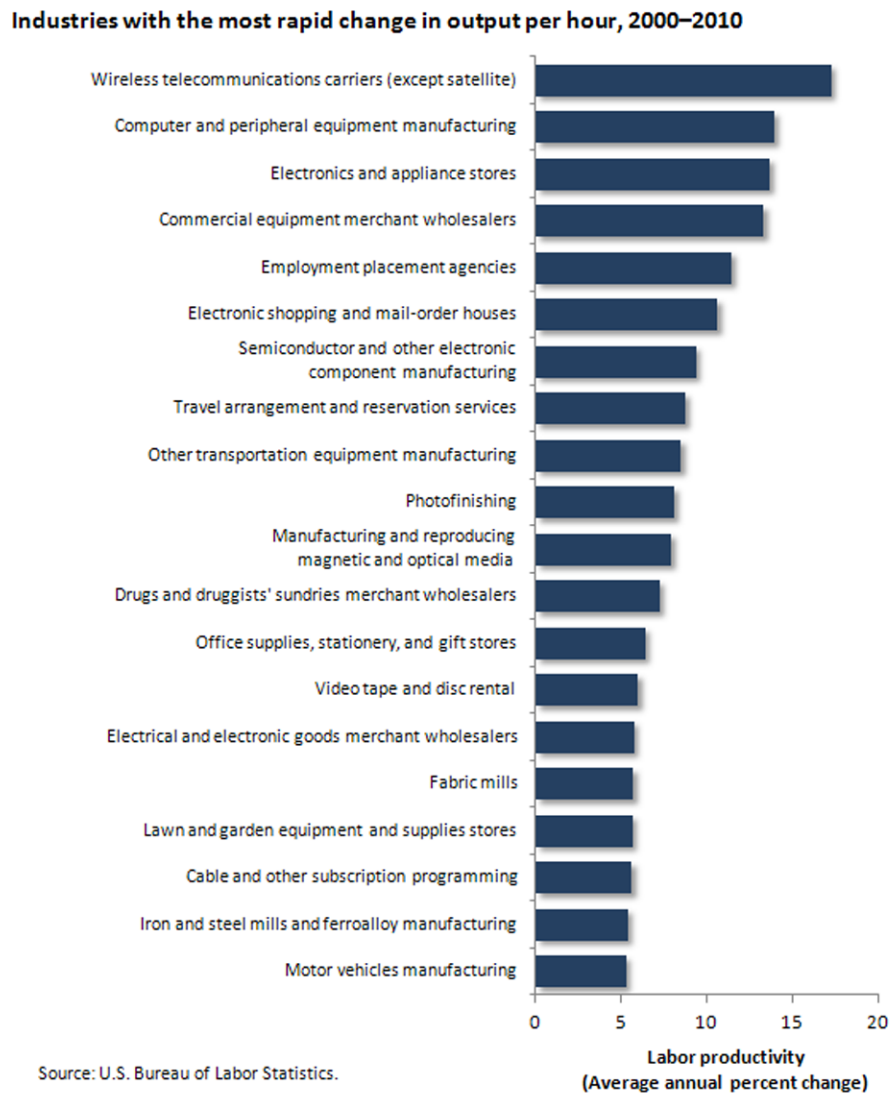
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August 5, 2018

Computer and peripheral equipment manufacturing industry is one of the leading industries in technology and innovation in the global economy, and the American companies in this industry have a large market share. The main driving engines of the industry are innovations and inventions (1). Smartphones, laptop and desktop computers, tablets, the internet of things technologies, network technologies, and other information and communication tools are produced in this industry. Digitalization of information and analysis of large data sets are some important developments in this industry nowadays. Also, we observe that many companies are spending effort on developing materials used in electronics. For instance, developments in the field of energy storage and production might open new doors for improvement in the industry. Subsequently, it is quite possible to claim that there is no upper limit of development in this industry.

Considering that innovation has a very crucial role in competition in this market, this market is a monopolistic competitive market. Rational customers in the market follow the technological development, and they aim at purchasing the possible highest technology with the possible lowest price; the companies operating in this market spend effort for differentiating their products to make their customers believe that their products are superior to the others. The companies heavily use advertisement and promotion campaigns, and creating loyalty among their customers is very critical for them. In other words, they spend effort on gaining relatively higher monopoly or competition power in the short-run, to be able to play around the prices of their products to maximize their profits. However, it is not possible to continue this strategy in the long-run because investing large financial resources in advertisement and promotion campaigns, is not feasible for the companies in the long-run. Although the market structure is monopolistic competitive, the number of companies operating in this market is limited.

Therefore, it may not be an exaggeration to name this market as an oligopolistic competitive market, at least in the short run (2). However, considering that there might be new entrances to the market after the leading technologies are disseminated to the other companies, this market structure might turn into a monopolistic competitive market in the long-run.



Graph 1: Labor Productivity

Source: US Bureau of Labor Statistics

This industry uses a high-quality labor force in the market and pays one of the highest annual mean wages to the workers, over USD 95,000 (2). That means, the labor productivity is quite high in the industry. Also, the labor force is supported by high-technology machinery, and that means, any new entrant needs to make a significant investment (2). However, on the other side, some small-sized companies might develop critical technological innovations and sell it to the large companies in this industry. We observe that the large technology companies purchase some small technology developing companies, to enhance their innovation capacities. In other words, there exists a high entry barrier for the small companies to enter the market, which reinforce the idea of oligopolistic competition.

Apple, Microsoft, Google, Samsung, Google, and Huawei are among the most important producers in this market (2). These companies have the leading position in the market, and all these companies outsource their production activities to the developing nations for optimizing their production costs. Also, these companies hire high-quality engineers and professionals to be a leader in their markets. Consequently, these companies have a high power of competition in the market. Therefore, entering this market as a small or medium sized company, is not possible and feasible. In other words, the competition is quite limited in the market, and even it is possible to say that government intervention is necessary for increasing the efficiency in the market. Google has been sentenced to pay a sizeable financial bill in Europe recently, and we all know the case of Microsoft's monopoly in the last decade. It is possible to see similar cases shortly because these companies are still leading the market, and their innovation capacity is very high. Therefore, they might share the global market easily among them. In other words, we would expect a monopolistic competition in this market because of the high innovation capacity, but we observe that these companies are sharing the global market with a secret agreement or hidden,

unknown way. For instance, while Apple sells its products to the customers with relatively higher incomes, Samsung, Huawei, and other brands are preferred by the people with relatively lower incomes. In some professions, only some specific brands or software is preferred to the others. Also, we observe that each company has different advertisement companies. By only analyzing the advertisement strategies of the companies, it is possible to understand how the global market is shared.

Considering that using high-technology products does not provide only a direct utility, but also a prestige to the users, this market will be lively in the future. This situation is expected to increase the competition in the market. Also, the patents owned by the large companies nowadays will expire in the next decade, and the other companies can easily develop some new technologies built on the revealed patented technologies of the large companies. Consequently, it is highly possible to expect the formation of a competitive industry in the future.

Sources

1. Greenlaw, S. A., Shapiro, D., & Taylor, T. (2018). Principles of economics 2e (2nd ed.). Houston, TX: OpenStax College, Rice University.
2. Ju, J. (2002). Oligopolistic Competition, Technology Innovation, and Multiproduct Firms. *Review Of International Economics*, 11(2), 346-359. doi: 10.2139/ssrn.298722